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The effects of guided aural versus guided aural-visual modeling on the performance achievement of beginning string instrumentalists

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THE EFFECTS OF GUIDED AURAL VERSUS GUIDED AURAL-VISUAL MODELING ON THE PERFORMANCE ACHIEVEMENT OF BEGINNING STRING INSTRUMENTALISTS

by

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APPROVAL PAGE

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The purpose of this study was to determine if modeling conditions had a significant effect on the performance achievement of beginning string students. During phase I, guided aural and guided aural-visual modeling tapes of Applebaum's String Builder, Book 1, were produced for violin; a two-part Likert scale adjudication form was designed and tested; a pilot study was conducted; and companion guided aural and guided aural-visual modeling tapes were produced for viola, cello, and double bass.

During phase II, the main study was conducted to test the null hypothesis: There is no significant difference in performance achievement as a result of practice conditions under three levels of experimentation--guided aural modeling, guided aural-visual modeling, and no modeling conditions. Twenty-three fourth-, fifth-, and sixth-grade beginning string subjects were administered Gordon's (1965) Music Aptitude Profile and Dunn, Dunn, and Price's (1988) Learning Style Inventory. Subjects were assigned randomly to one of three treatment groups and received instruction in a heterogeneous string class. After four weeks, the 10-week treatment period began; group I practiced with the guided aural model, group II with the guided aural-visual model, and group III without modeling conditions.

After treatment, the posttest was administered whereby each subject was videotape recorded performing "Yankee Doodle." The recorded performances were evaluated by four adjudicators using the two-part Likert scale adjudication form.

The null hypothesis was tested by a one-way analysis of covariance with subjects' MAP scores serving as a covariate. No significant effect was found ($p > .05$); therefore, the null hypothesis was retained.

Relationships between subjects' performance achievement scores and grade level, instrumentation, previous formal music lessons, and learning modality were determined by multiple regression analyses. No significant relationships were found between subjects' performance achievement scores and grade level, instrumentation, and learning modality. An isolated significant relationship of .58 ($p < .05$) was found between the aural measurement and subjects' previous music lessons.

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CHAPTER I

INTRODUCTION

Social Learning Theory in Music Education

Imitating human behavior is recognized by sociologists and social learning theorists as a fundamental human process which results in learning--a change of behavior (Lefrancois, 1972). Research conducted by social learning theorists also reveals that members in a society learn normative behavior by observing and imitating exemplary individuals (Miller & Dollard, 1941). Bandura (1963) concurred with these findings and defined the process by which humans learn novel behaviors through observation and imitation as modeling. Furthermore, he extended the modeling principles into the field of education and identified three methods by which models can be presented when teaching: (1) live, such as an instructor in a classroom, (2) symbolical, through oral and written instruction or through pictorial devices such as photographs, films, and audiovisual aids, and (3) verbal or pictorial exemplars, such as "heroes" and "villains" (Bandura & Walters, 1963).

Researchers have studied the effectiveness of live, symbolic, and exemplar modeling in various areas of music education including vocalization (Green, 1987; Montgomery, 1988; Small & McCahern, 1983), affective behavior

toward music (Baker, 1980; Alpert, 1982; Brown, 1978), rehearsal technique and classroom management (Gonzo & Forsythe, 1976; Moore, 1976; Brand, 1977), and the acquisition of musical performance skills during rehearsal (Sang, 1987; Jetter, 1978; Dickey, 1991). Also, studies have been conducted to determine the effectiveness of modeling by use of audiovisual aids (Anderson, 1981; Rosenthal, 1984, Burgess, 1974; Rees, 1976). Based on the foundation of previous research, the current study was designed to investigate further the effectiveness of symbolic modeling by use of audiovisual aids to supplement beginning string instruction.

String Instruction and Modeling

Throughout a child's formative years of instruction, string teachers focus specifically on numerous factors leading to the development of basic skills that provide a foundation for advanced performance. Typically, the beginning stages of string instruction include two common components necessary for satisfactory student performance achievement: (1) the development of aural acuity or perception and (2) the refinement of physical skills. Aurally, string students must develop acceptable performance concepts and accuracy in areas such as intonation, tone production, articulation, dynamics, and rhythmic steadiness. Physically, string students must achieve appropriate

performance posture and instrument placement, positioning and movement of the left and right hands, positioning and movement of the left- and right-hand fingers, and characteristic tone, dynamic flexibility, and articulations by the execution of various bowings (Dillon & Krieshbaum, 1978; Lamb, 1990; Klotman, 1988). To teach beginning string students aural and physical performance skills, an instructor frequently serves as a model by performing the desired behaviors on a stringed instrument while simultaneously describing a means of execution. Thus, to supplement the printed music during class instruction, students hear and see a live representative performance that can be imitated.

Since out-of-class practice precludes the effectiveness of the modeling factor when students leave the classroom, problems may occur when students do not retain the modeling and verbal instructions presented in class, are not able to imitate the performance demonstrations presented in class, or have parents or guardians who cannot model adequately or guide out-of-class practice (Anderson, 1981). As a result, the amount of practice time may not correlate directly with levels of performance achievement. Also, without supervision and modeling, there is an increased probability that students will develop incorrect performance skills while practicing.

To compensate for the absence of a teacher during home practice, supplemental instructional models presented by audiovisual aids may provide substantial educational benefits

for beginning string students (Dickey, 1992). For example, an audio cassette recorder can be used during practice to play back an aural model of a string performance while allowing students to hear and perform simultaneously with the recording. A video cassette recorder can play back an aural and visual model of correct sound and physical posture and movement simultaneously for students. Hence, with the use of audiovisual equipment, the modeling presented during class instruction can be replicated during out-of-class practice.

Advantages to instructional audiovisual modeling supplements in a logistical sense include equipment portability and operational simplicity, relatively inexpensive tapes, and the versatility of taped instruction whereby students may view or listen to modeling tapes at school or home and can review sections of a lesson repeatedly without time limitations (Duane, 1974). Furthermore, when practicing with an aural-visual model that is presented through a video cassette recorder, students can see an augmentation of fine motor movement if the model is shown on a large screen monitor.

Aural Modeling

Tape recorded aural modeling is a component of several commercial non-traditional and traditional methods of string instruction currently available. String instructors using the Suzuki approach, a non-traditional method, require

beginning and intermediate students to learn music during home practice by listening to aural models recorded on audiotapes without reading printed music. These instructors contend that by reducing visual stimuli and presenting characteristic aural models, beginning string students will demonstrate greater improvement in tone production, accurate intonation and rhythm, and appropriate posture and hand positions while performing as compared to students studying with a traditional instructional string method that includes reading printed music (Suzuki, 1969; Mills & Murphy, 1973; Fink; 1977).

Traditional string method publications, however, use aural modeling strategies to supplement students' home practicing while reading printed music. For example, string students using Avsharian's (1990) Fun with Solos series are able to hear an audiotape recording of the musical exercises while reading printed music. Another example is McLeod's (1987) Strolling Strings method series which also markets an audiotape of the musical exercises printed in the book to supplement classroom instruction. Recently, Highland/Etling Publishing Company published Strictly Strings (Dillon, Kjelland, & O'Reilly, 1991), a method book for beginning string students that includes a supplemental aural model of the printed exercises recorded on audiotapes or compact discs.

Although the materials cited above provide aural music models for string students, they do not contain verbal instruction to reinforce correct performance behaviors. Also, visual modeling of physical skills is not present. These tape recordings, therefore, do not provide all aspects of a string instructor's modeling during class.

Research has been conducted to determine the effectiveness of aural modeling used for music instruction; however, substantial differences in results have been found among investigators. Two recent studies that are representative of these findings include Anderson's (1981) investigation of the effects of aural modeling on the performance achievement of beginning wind students. He found no significant difference in performance achievement between students who practiced with aural models and students who practiced without modeling conditions. In contrast, however, Rosenthal (1984) compared the effects of guided aural modeling, aural modeling only, guided only, and practice only without modeling conditions on performance achievement of college wind students. Rosenthal concluded that students practicing with aural modeling only, without verbal instruction, improved significantly in performance achievement when compared to students practicing with the other three treatment conditions.

Aural-Visual Modeling

For the purpose of supplementing string instruction, aural-visual models recorded on videotape also are available to instructors and students. An example of a commercial videotape is Roland's (1972) The Teaching of Action in String Playing, a series of aural-visual modeling tapes designed to demonstrate fundamental performance skills for beginning and intermediate violinists. A recent commercial example produced is A Violin Teacher's House Call (Swafford, 1990), a 15-minute beginning level videotape intended to demonstrate an approach to proper position and performance on the violin. Also, instructional videotapes serving as aural-visual models have been produced in a masterclass format whereby established string pedagogues or performers, such as Heifetz (1962), Galamian (1980), and Havas (1990), are videotape recorded while instructing string students.

Aural-visual modeling typically provides the means for students to hear and observe simultaneously the aural and physical aspects of string performing. Performances and lessons reproduced on videotape are narrated to provide supplementary instruction on technical and musical intricacies. Of consideration, however, is the possibility that the addition of visual information may divert students' attention from aural elements of a performance (Beagles-Roos & Gat, 1983). Furthermore, aural-visual modeling tapes often are not designed for daily practice and do not

correlate with an instructional method book. Therefore, aural-visual modeling tapes currently marketed may not serve as a functional supplement for home practice by beginning string instrumentalists.

Unfortunately, minimal research has been conducted to determine the effectiveness of aural-visual modeling on performance achievement. One study was conducted by Burgess (1974) to determine the effectiveness of a multimedia approach in teaching violin to beginning college string students. Included as the treatment for this study was a videotape of violin lessons. Burgess concluded that this method had no significant effect on performance achievement. In another study, Rees (1976) investigated the effectiveness of a self-instructional aural-visual model on beginning double bass students and found no significant effect on their performance achievement. Although Burgess and Rees found that self-instructional aural-visual modeling did not influence significantly string instrumentalists' performance achievement, both researchers concluded that further study on aural-visual modeling is necessary to provide objective data to promote more effective pedagogical procedures.

Statement of Purpose

Although aural modeling procedures are used during practice to supplement class music instruction, published studies show considerable disagreement among researchers

regarding their effectiveness on performance achievement. The effects of aural-visual modeling, however, have received much less attention among researchers. Studies comparing aural versus aural-visual modeling on the performance achievement of beginning instrumentalists are scarce in the research literature. Furthermore, there is limited published research on the use of guided aural and guided aural-visual modeling among upper elementary school age music students when aural performance acuity and physical performance skills are introduced (Dillon & Kriechbaum, 1978).

Although there is insufficient empirical evidence to support the effectiveness of aural and aural-visual modeling materials for beginning string students when practicing, curriculum specialists, publishers, and music companies continue to produce supplementary tapes, motivated possibly by the commercial value of these products without ample consideration to the educational value. These products are purchased by music instructors and parents, and used by students with little knowledge of benefits, applicability, or negative effects. Therefore, concentrated research on effects of modeling is warranted so that educational needs of students can best be served.

The purpose of this study was to determine the effects of modeling techniques during out-of-class practice on the performance achievement of beginning string students. Specifically, the study was designed to investigate

differences in the effectiveness of guided aural modeling, guided aural-visual modeling, or no modeling treatments on performance achievement.

Definition of Terms

In the current study, aural modeling is defined operationally as an auditory instructional demonstration of performances recorded on an audiotape and presented by the use of an audio cassette tape player. Aural-visual modeling is defined operationally as an auditory and visual instructional demonstration of performances recorded on a videotape and presented by a video cassette player. A guided model incorporates verbal instructions with the aural or aural-visual stimuli. Practice is defined as an activity outside of class instruction, either at home or school, by which string students reinforce assigned performance skills without the presence or guidance of a teacher.

Aural performance acuity encompasses the production of accurate intonation, tone, articulation, rhythmic stability, and dynamic sensitivity when performing on a stringed instrument. Physical performance skills encompass correct positioning and movement of the left and right hands and arms, correct positioning and movement of the left- and right-hand fingers, and correct posture when performing a stringed instrument. Performance achievement is defined as a positive change in aural performance acuity and physical performance skills of beginning string students.

Summary

Fundamental aural and physical stringed performance skills are introduced by string instructors and practiced by string students during the first year of instruction (Applebaum, 1986). Although a string instructor may demonstrate and reinforce verbally correct aural performance acuity and physical performance skills in class, out-of-class practice is expected to supplement classroom instruction. Unfortunately, students may not achieve full advantage of practice time because they do not retain the instructions presented in class, or do not receive adequate supervision during practice, or do not have aural or visual models during practice. If modeling presented in the classroom is provided also during practice through audiovisual aids, students' performance achievement may be facilitated.

CHAPTER II

REVIEW OF RELATED LITERATURE

The proliferation of audio and video equipment in American homes and schools has provided the means for applications of instructional modeling outside the classroom. A survey of studies from the 1960s through the 1980s reveals that aural and aural-visual modeling techniques have been used for many years to supplement traditional music instruction with out-of-class practice and self-instruction. The following review of related literature provides information on investigations of guided aural and guided aural-visual modeling as a supplement to formal music instruction.

Modeling in Music Instruction

Aural Modeling

Biggs (1960) investigated the effects of aural models on the performance achievement of college undergraduate brass majors. Twenty volunteers were assigned to a control or experimental group based upon the result of matched-pairing music aptitude scores. All subjects were taught privately once a week by Biggs, and each studied traditional brass etudes; however, the experimental group practiced with a supplemental guided aural model of the same etudes recorded

on an audiotape whereas the control group practiced with no modeling conditions. Biggs found that there was no significant difference in the performance achievement between the two groups and concluded that further research should be conducted to determine if aural modeling can be effective in supplementing music instruction.

Puopolo (1970) investigated the performance achievement of beginning cornet and trumpet students as a result of exposure to a supplemental guided aural model recorded on an audiotape. Fifty-two fifth-grade male students were assigned randomly to experimental or control groups and received the same classroom instruction. However, the experimental group practiced with the guided aural model of assigned music exercises accompanied with verbal reinforcement of correct performance behavior while the control group practiced the same exercises without the modeling supplement. After a 10-week treatment period, The Watkins-Farnum Performance Scale (Watkins & Farnum, 1962) was administered to all subjects; they performed each exercise in order until the item difficulty exceeded their technical facility. Puopolo found a significant difference ($p < .01$) in performance achievement between the two groups; the experimental group demonstrated superior performance achievement when compared to the control group. Puopolo concluded that guided aural models are effective in supplementing elementary instrumental instruction and

recommended that further research should be conducted to determine possible effects of subjects' intelligence in association with modeling conditions.

Arant (1970) investigated the effects of a self-instructional guided aural model on the performance achievement of beginning voice students. The guided aural model was recorded on an audiotape and included music exercises and verbal instructions. Twenty-six college students enrolled in a beginning voice class were assigned to control or experimental groups by stratified sampling based on gender. The control group received instruction in a traditional voice class, and the experimental group received voice lessons using the self-instructional guided aural model. After eight weeks of treatment, each subject was recorded individually singing a simple song; these taped performances were evaluated by four voice instructors. Arant found no significant difference in performance achievement between the two groups. Although significance was not achieved, the experimental group performed to a level whereby Arant concluded that the self-instructional guided aural model and a traditional voice class could serve as equally effective instructional procedures.

Sperti (1970) investigated the effectiveness of a modified Suzuki approach on the performance achievement of beginning fourth-grade clarinettists. Fifty-four subjects were assigned to experimental or control groups on the basis

of matched-paired scores from Seashore Measures of Musical Talent (Seashore et al., 1960). Subjects in the experimental groups received clarinet instruction with the modified Suzuki approach that included parental involvement, a comprehensive listening program of music literature, and rote learning music exercises by listening to aural models recorded on an audiotape without the presence of notation. Subjects in the control group received instruction in a traditional clarinet class and learned music exercises by reading notation. After a 36-week treatment period the subjects were tape recorded performing exercises from the Performance Evaluation Scale (Sperti, 1970) and The Watkins-Farnum Performance Scale (Watkins & Farnum, 1962); they performed each exercise in sequence until the item difficulty exceeded the subjects' technical facility. After scores of the two scales were combined, Sperti found that there was a significant difference ($p < .05$) in performance achievement between the two groups with the experimental group's performance achievement being superior to that of the control group. Although Sperti did not determine the extent to which parental involvement influenced the experimental group's performance achievement, he did conclude that obtaining musical information by an aural model with deferred note-reading was a superior method for learning clarinet at the elementary level when compared to a traditional instrumental class procedure.

Peightel (1971) investigated the effectiveness of traditional instrumental class instruction supplemented by the use of a recorder-responder unit on the performance achievement of beginning trombonists. During practice, the unit permitted students to hear an aural model of assigned music exercises and served as a recorder and playback unit. Thirty students in grades four and five were assigned randomly to one of two experimental groups or a control group and learned twenty, four-measure exercises composed by Peightel. Subjects in experimental groups I and II used the unit when practicing; however, subjects in group I were presented an aural model of each exercise with subsequent practice of the exercise, and then presented a playback of their own performance. Subjects in group II practiced each exercise, heard a playback of their performance, then were presented an aural model. Subjects in the control group practiced the exercises without the recorder-responder unit. After 12 weeks of treatment, Peightel found that there were significant differences ($p < .05$) among the three groups; group I demonstrated greater performance achievement when compared to groups II and III. Peightel concluded that the unit could supplement music instruction effectively. Sequentially, however, students using the unit should hear an aural model before practicing an exercise.

Weihe (1971) investigated the influence of guided aural modeling on high school trumpeters. The guided aural model

consisted of an audiotape recording of solo works performed by professional trumpeters and verbal instructions on correct performance behaviors. Thirty-one students from four secondary schools were assigned randomly to control or experimental groups. All subjects were required to learn four solo works from the Prescribed Music Bulletin (The University Interscholastic League, 1967) without instruction; however, subjects in the experimental group practiced with the guided aural model and subjects in the control group practiced without the modeling condition. After two weeks of treatment, all subjects were tape recorded performing the solo works. Eight college brass instructors evaluated the subjects' recorded performances, and Wiehe found that there was a significant difference ($p < .01$) between the two groups; the experimental group demonstrated greater performance achievement when compared to the control group. Weihe concluded that guided aural models should be available for students to supplement music learning.

Zurcher (1972) investigated the effects of aural modeling during home practice upon the performance achievement of beginning instrumentalists. Forty-three brass students in grades four, five, and six were assigned randomly to control or experimental groups. The experimental group practiced with the aural model of music exercises composed by Zurcher and recorded on an audiotape, and the control group practiced the same exercises without modeling conditions.

After eight weeks of treatment, the control and experimental groups' performances were compared for pitch error discrimination, tempo stability, pitch-matching skills, fingering or slide position error, and rhythmic error discrimination. Zurcher found no significant differences between the control and experimental groups in the demonstration of tempo stability and fingering or slide position error. However, significant differences ($p < .05$) were found between the groups in the areas of pitch error discrimination, pitch-matching, and rhythmic discrimination; the experimental group demonstrated greater achievement in these tasks when compared to the control group. Zurcher attributed the differences in the various tasks to the effectiveness of the aural modeling tapes and concluded that modeling conditions should be available to music students.

Folts (1973) investigated the effectiveness of a guided aural model on the performance achievement of beginning instrumentalists. The guided aural model consisted of an audiotape recording of the music exercises from Sound of Success (Rinehart, Erving, & Digregori, 1963) and Folts' verbal instructions to reinforce correct performance behaviors. One hundred elementary flutists, clarinettists, and trumpeters were administered The Watkins-Farnum Performance Scale (Watkins & Farnum, 1962) as a pretest; they performed each exercise in order until the item difficulty exceeded their technical difficulty. After testing, the

subjects were assigned to control or experimental groups based upon a matched-pairing of their scores. All subjects were instructed using the Sound of Success method book, and were required to practice every day after school for 20 minutes; however, the experimental group practiced with the supplemental guided aural modeling tape while the control group practiced with no modeling conditions. After 14 weeks of treatment, three adjudicators evaluated the subjects' performance of exercises from The Watkins-Farnum Performance Scale as a posttest employing the same procedure as the pretest. Folts found that there was a significant difference ($p < .05$) in performance skills between the two groups; the experimental group demonstrated greater performance achievement when compared to the control group. Folts concluded that a guided aural model could facilitate the development of students' pitch and rhythmic accuracy.

Anderson (1979) investigated the effectiveness of aural models recorded on an audiotape for home practicing on the performance achievement of sixth-grade beginning woodwind students. The Watkins-Farnum Performance Scale (Watkins & Farnum, 1962) was administered to 20 subjects as a pretest; they performed each exercise in order until the item difficulty exceeded their technical facility. After testing, the subjects were assigned randomly to experimental or control groups. Subjects in the experimental group were required to practice assigned musical exercises with the

aural model and subjects in the control group practiced without the modeling condition. After eight weeks of treatment, The Watkins-Farnum Performance Scale was used as a posttest employing the same procedure as the pretest. Anderson found that there was no significant difference in performance achievement between the control and experimental groups. Anderson concluded that a longer treatment period and stringent controls over intervening variables may result in greater differences between the two groups.

Rosenthal (1984) compared the effect of guided aural modeling, aural modeling, guided modeling, and practice without modeling conditions upon the performance achievement of graduate and upper-level undergraduate university woodwind and brass students. Forty-four subjects were assigned randomly to one of four treatment groups to practice individually "Etude No. 22" by Kopprash (1939) for 15 minutes. However, subjects in group I practiced with a guided aural model, subjects in group II practiced with an aural model, subjects in group III practiced with a guide explaining the etude, and subjects in group IV practiced without modeling conditions. After 15 minutes of individual practice under the four experimental conditions, each subject was recorded performing the etude. Two adjudicators evaluated the performances and Rosenthal found that there was a significant difference ($p < .05$) among the four groups; subjects who learned the etude with the aural modeling

treatment performed the notes, rhythm, dynamics, and tempo with greater accuracy when compared to the other three groups. Rosenthal concluded that modeling without verbal instruction may be the most beneficial instructional modeling condition for advanced students. She also suggested that research over an extended treatment period beyond 15 minutes should be conducted to determine the effects of various modeling conditions on the performance achievement of pre-college age music students.

Rosenthal, Wilson, Evans, and Greenwalt (1988) conducted a study to compare the effects of five practice conditions on the performance accuracy of 60 college instrumentalists. The subjects were assigned randomly to one of the five groups and were required to learn "Etude No. 96" by Bona (1969). Subjects in group I were presented an aural model of the etude and were not allowed to practice with their instrument; subjects in group II vocalized the etude and were not allowed to practice with their instrument; subjects in group III silently analyzed the etude without practicing with their instrument; subjects in group IV practiced the etude with their instrument; and subjects in group V served as a control group and were given an unrelated music exercise to practice with their instrument. After three minutes of treatment, all subjects were tape recorded performing the etude; the taped performances were evaluated by one adjudicator. A significant difference ($p < .10$) in performance accuracy was

found among the five groups. Group III performed the rhythms with greater accuracy when compared to the other groups. Group I and IV performed the phrasing with greater accuracy when compared to the other groups. Group I, III, and IV performed the tempo with greater accuracy when compared to the other groups. Although the treatment period was brief and the method of evaluation may have been unreliable, Rosenthal et al. concluded that listening to an aural model is as effective as practicing with an instrument when learning music over a short period of time. Further research was suggested to determine the effects of these practice conditions over an extended treatment period.

Aural-Visual Modeling

Studies have been conducted to investigate the effectiveness of visual modeling using videotapes. Burgess (1974) investigated a self-instructional, multimedia approach to teaching violin to thirty-two college undergraduates enrolled in a strings method course. Sixteen subjects volunteered to study violin by self-instruction and the remainder of the subjects studied the violin through class instruction. The self-instruction treatment included a combination of charts, a guided aural-visual model recorded on videotape, a guidebook sequence, tape recorded accompaniments, a mirror, and a videotaped feedback of achievement. At the conclusion of one semester, subjects

were videotape recorded performing on a violin and their performance achievement was evaluated by three string specialists. Burgess found that there was no significant difference in the performance achievement between the two groups. Although no significance was found, Burgess concluded that the multimedia approach to string instruction, which included the use of a guided aural-visual model, is equally effective to that of a traditional string method class.

Rees (1976) investigated the effectiveness of a self-instructional program, which included a guided aural-visual model recorded on videotape, on the performance achievement of beginning double bass students. Twelve seventh-grade double bass students were assigned randomly to experimental or control groups. Subjects in the experimental group studied double bass independently in the self-instructional program which included a guided aural-visual model of a double bass player performing music exercises with verbal instructions on correct performance behavior, a workbook to reinforce performance skills, and self-evaluation materials. Subjects in the control group were instructed in a traditional, homogeneous double bass class. After 13 weeks of treatment, the subjects were videotape recorded performing an exercise learned during treatment, and their performance achievement was evaluated by three adjudicators. Rees found that there was no

significant difference between the two groups. Rees attributed the lack of significant difference to the small sample size and recommended further investigation using a larger sample.

Fleming (1977) investigated the effectiveness of modeling in the form of guided practice with the use of video equipment to develop choral conducting skills. Twenty-two undergraduate choral conducting students were assigned randomly to control or experimental groups. All subjects were instructed in a traditional conducting class and practiced conducting compositions from Schirmer's (1963) Five Centuries of Choral Music; however, the experimental group practiced with the self-instructional program which included a guided aural-visual model, a score study guide, and videotape feedback for self-evaluation every two weeks. The control group practiced without modeling conditions. After a seven-week treatment period, each subject was videotape recorded conducting Barbar's "Let Down the Bars, O Death." Three adjudicators evaluated the taped performances and Fleming found that there was a significant difference ($p < .05$) between the two groups; the experimental group demonstrating superior conducting skills when compared to the control group. Fleming concluded that guided aural-visual modeling effectively can supplement conducting instruction and should be available to students.

In a similar study, Jordan (1980) investigated the effectiveness of a supplemental guided aural-visual model on selected conducting skills of beginning college conducting students. Sixty subjects were assigned randomly to experimental or control groups and were instructed in a traditional conducting class. All subjects were required to practice fermati and cues; however, the experimental group practiced conducting with the supplemental guided aural-visual model recorded on a videotape and the control group practiced with no modeling conditions. After a five-week treatment period, each subject was videotape recorded conducting a small vocal ensemble. Three adjudicators evaluated the fermata and cueing gestures of the taped performances. Jordan found that there was a significant difference ($p < .01$) between the two groups; the experimental group demonstrated superior precision when conducting fermati and cues. Jordan concluded that conducting students would make more efficient use of their practice time if supplemental guided aural-visual models were available.

Summary

The studies reviewed in Chapter II show that considerable disagreement exists among researchers regarding the effectiveness of aural and aural-visual modeling on the performance achievement of music students. The studies

conducted by Puopolo (1970), Sperti (1970), Peightel (1970), Weihe (1971), Zurcher (1972), Folts (1973), Rosenthal (1984), Rosenthal et al. (1988), Flemming (1977), and Jordan (1980) show a significant difference in the performance achievement between subjects who used modeling conditions and subjects who did not use modeling conditions. Based on the findings from their studies, a general conclusion can be formulated that modeling techniques used as a supplement to class instruction or for self-instruction are beneficial in improving performance achievement of student musicians.

In contrast, however, Biggs (1960), Arant (1970), Anderson (1979), Burgess (1974), and Rees (1976) found no significant differences in performance achievement between subjects who used modeling techniques and subjects who did not use modeling as a part of instruction. Although no significant differences were found in these studies, the investigators universally suggested that further study of modeling as an instructional or supplementary practice technique should be conducted with large sample sizes, extended treatment periods, and high quality audiotape and videotape recordings.

In addition to contradictory conclusions, none of the surveyed research on modeling techniques included statistical analyses on the relationships between performance achievement and subjects' grade level, instrumentation, previous formal music lessons, and individual learning modalities. In

specialty areas, only Burgess (1974) and Rees (1976) investigated modeling condition effects on string students, and Rees exclusively used elementary beginning students as subjects. None of the surveyed studies were designed to determine the effects of guided aural versus guided aural-visual modeling on the performance achievement of beginning string instrumentalists.

A major concern emerged after an exhaustive search of the literature; only two studies were published in leading music research journals in the past decade on the aggregate topics of modeling through audiovisual aids, and the combination of modeling conditions on performance achievement. Unfortunately, the current literature shows a propensity of researchers to investigate the effects of advanced technological audiovisual aids on music learning rather than the effects of established audiovisual aids on music learning (Higgins, 1992). Therefore, research in the last decade on modeling by use of audio or video media is scarce.

Null Hypothesis

The null hypothesis serving the principal research objective of the current study is stated: There is no significant difference in performance achievement of beginning string instrumentalists as a result of practice conditions under three levels of treatment--guided aural

modeling, guided aural-visual modeling, and no modeling condition. Alpha level was set at .05 for all statistical analyses. In addition to the principal research objective delineated by the null hypothesis, the following questions regarding the three levels of practice treatments and other variables served as a secondary research objective and were treated independently.

1. Is there a significant relationship between performance achievement and subjects' grade level?
2. Is there a significant relationship between performance achievement and subjects' instrumentation?
3. Is there a significant relationship between performance achievement and subjects' previous formal music lessons?
4. Is there a significant relationship between performance achievement and subjects' learning modality preference?

CHAPTER III

PROCEDURE

Introduction

To compare the effects of guided aural modeling, guided aural-visual modeling, or practice only with no modeling conditions on the performance achievement of beginning string students, a two-phase study was conducted. Phase I consisted of the development of modeling tapes for violin, the development of a reliable adjudication form and procedure to evaluate the performance achievement of beginning string students, a trial evaluation session, and a pilot study with beginning violinists as subjects. The pilot study served as an exploration to obtain information for refining the modeling tapes and to identify and eliminate procedural problems before investigation of the main study. An evaluation session was conducted after the pilot study to obtain information for refining the adjudication form and evaluation procedures and to measure the performance achievement of the subjects. In preparation for the main study, the modeling tapes for viola, cello, and double bass were produced after the evaluation session under careful control to ensure that these tapes were equivalent to the violin tapes.

During phase I, two different open-ended research questionnaires were used to obtain information. A questionnaire was completed by the adjudicators after the trial evaluation session and the evaluation session following the pilot study to obtain feedback for the refinement of the adjudication form and procedure. Parents of subjects participating in the pilot study completed a questionnaire regarding their child's practice location and available audiovisual equipment.

Phase II included the main study which involved the completion of the parental questionnaire to obtain information about the subjects, the administration of Gordon's (1965) Music Aptitude Profile and Dunn, Dunn, and Price's (1989) Learning Style Inventory to all subjects, the implementation of the treatment, and data analysis to test the null hypothesis. The independent variable was the practice condition under three levels of treatment: guided aural modeling, guided aural-visual modeling, or no modeling. An adjudication form served as a measurement of the dependent variable--subjects' performance achievement. To test the null hypothesis, data were analyzed using an analysis of covariance, with the subjects' music aptitude scores serving as the covariate. The relationships between performance achievement and subjects' grade level, instrumentation, previous formal music lessons, and individual learning

modality preference were determined by multiple regression analyses.

Both phases of the study were conducted at Bob Jones Elementary School in Greenville, South Carolina--a private, nondenominational, religious institution with students primarily from a middle-class socioeconomic stratum. Subjects for the pilot study of phase I consisted of ten fourth-, fifth-, and sixth-grade beginning violin students enrolled in summer music lessons. They were required to practice with a guided aural modeling tape or a guided aural-visual modeling tape. Subjects for the main study of phase II consisted of 23 fourth-, fifth-, and sixth-grade students who were enrolled in a beginning string class studying violin, viola, cello, or double bass who did not participate in the pilot study. The subjects were assigned randomly to one of three groups regardless of instrumentation and were required to practice with a guided aural modeling tape, guided aural-visual modeling tape, or without modeling conditions. After the treatment period, a posttest was administered to provide data for comparison of the performance achievement among the three groups.

Phase I: Procedural Development and Pilot Study

Violin Tape Preparation

The method book used for the modeling treatments and instruction was Applebaum's (1960) String Builder, Book 1, a

traditional string method book that is used and commonly recommended by string instructors (Klotman, 1988). The investigator analyzed the sequential procedures of the method book and divided it into 13 segments so that each segment or lesson introduced a new performance behavior. Then an instructional script was composed to coincide with the exercises of the 13 lessons in the violin instruction book (Appendix A). At the beginning of each lesson, a verbal explanation of the new performance behavior was presented in the script. With the introduction of each new performance behavior, verbal reinforcement was also provided for correct posture, instrument placement, tone production, and intonation. The performance behaviors presented in the script were based on a traditional approach of string performance as presented in String Builder and generally advocated by string instructors, curriculum developers, and performers as shown in string method textbooks by Applebaum (1986), Dillon and Kriechbaum (1978), and Klotman (1988).

After the script was written, permission was obtained from Belwin, Incorporated (Appendix B) to record and produce the guided aural and guided aural-visual modeling tapes of String Builder, Book 1. A professional violinist, who has taught violin performance at Bob Jones University and performed concerts throughout the United States, and a narrator were employed to record the guided modeling tapes for violin.

The recording sessions for the modeling tapes were conducted in a professional, acoustically treated recording studio with carpeted walls and a ceiling covered with acoustical tiles. Two WV-3990B Panasonic industrial portable color video cameras and two AKG D33BT Mark II microphones were used to produce master videotapes of the performance on TDK High Standard one-half inch video cassette tapes. A professor from the radio and television department at Bob Jones University served as a recording engineer and technician for staging and adjusting the set, cameras, microphones, and audio levels in a control room. The Educational Video Production Coordinator from Bob Jones University Press served as the project coordinator and camera operator.

On the set, two cameras were positioned to videotape record simultaneously the professional violinist's performance of the exercises from String Builder. One camera recorded the performer's full profile; the other recorded selected close-up segments of posture, hand positions, and bowings, thereby providing a dual angle videotape recording to be merged into one master aural-visual modeling tape. One microphone was positioned above the professional violinist's instrument, and another was attached to the shirt of the narrator who sat in front of the professional violinist but outside the camera range. Both audio stimuli were recorded by each camera.

During the recording sessions, the narrator read the script as the professional violinist performed the exercises, thereby providing an aural and visual model. Using a metronome, a performance tempo of 69 beats per minute for each exercise was established verbally by the narrator counting one full measure of beats. The violinist then performed the exercise. The metronome was set to produce a flashing light with no sound and was positioned in view of the narrator and professional violinist to synchronize their performance throughout the recording sessions. This procedure was repeated throughout the entire recording of the instruction book and script. Audio and video levels, camera and microphone positioning, and staging were documented by the recording engineer to assure that the subsequent production of the guided viola, cello, and double bass modeling tapes would exactly duplicate the production of the guided violin modeling tapes.

At the conclusion of the recording sessions, videotapes were merged and edited by a post-production editor from a local television station. The equipment used to edit the videotapes included a digital JVC BP-5300U player and a JVC BB-8600 recorder, which allowed the editor to stop for isolation of audio and video segments by a single frame, thus assuring precision in merging and dubbing. The editor eliminated audio and video recording errors committed by the

violinist and narrator so that the script and the exercises from String Builder were produced without mistakes. Title frames and close range shots of various performance behaviors to reinforce instruction also were merged and dubbed. The final product was a single videotape that served as the guided aural-visual modeling master tape for violin used by an aural-visual group during the pilot study. Using a Tascam 102 MK II cassette tape deck, a guided audiotape was dubbed from the master videotape. This tape served as the guided aural modeling master tape and used by an aural group during the pilot study.

Ten high quality copies of the videotape and ten high quality copies of the audiotape were duplicated by the editor from the master tapes onto Maxwell HGX-Gold 120 videotapes and Maxell XLII Extra Fine Epitaxial Cassette IEC Type II High Bias audiotapes for distribution to the subjects participating in the pilot study. The investigator and recording engineer previewed each of the duplicated tapes to ensure that all tapes were equivalent in audio and video quality.

Evaluation Procedure Development

Adjudication Form Design

The investigator designed an adjudication form (Appendix C) prior to the pilot study to measure the dependent variable, the subjects' performance achievement, after the posttest of the pilot and main studies. The adjudication

form was constructed as a five-point response continuum Likert scale format employing positive descriptive statements and had content validity to the information presented in the modeling tapes. The adjudication form was designed to measure performance achievement recorded and presented separately on an audiotape and videotape; therefore, the form consisted of two parts. The first part was an aural measurement consisting of nine statements that described the subjects' demonstration of aural performance acuity. The second part was a visual measurement consisting of 22 statements that described the subjects' demonstration of physical performance skills.

Trial Evaluation: Tape Recording Procedure

Although audiotape and videotape have been used successfully in evaluating performances achievement (Vasil, 1973; Fiske, 1983; Boyle, 1992), a trial evaluation session was conducted. This evaluation session served to familiarize four adjudicators to the evaluation procedure before the main study, to determine interjudge reliability, and to eliminate any procedural problems before measuring the dependent variable after the posttest of the pilot and main studies. During the trial evaluation session, eight elementary string students who had completed one year of violin, viola, cello, or double bass lessons served as subjects and were videotape recorded with one camera while performing "Yankee Doodle"

from Applebaum's String Builder, Book 1. The same audiovisual equipment and location used to produce the violin modeling practice tapes were used to videotape record the subjects' performance for this evaluation session.

Before the recording session, each subject was permitted to practice without coaching for one minute. Following the practice segment, the recording session began, and each subject was instructed to play number 125, "Yankee Doodle." As the subject performed the first four measures of "Yankee Doodle," a full profile of the subject was videotape recorded. When the subject performed the fifth measure, the camera zoomed in for a close shot of the left hand. After four measures, a close shot of the right hand was recorded. A full profile of the subject was recorded as the final four measures were performed. This procedure was replicated while recording each subject to provide performance consistency during the evaluation process.

After videotape recording all subjects, an audiotape was dubbed from the audio segment of the videotape using the Tascam 102 MK II cassette tape deck. The investigator redubbed the audiotape to be used for evaluation, randomizing the order of the subjects' aural performance to prevent the adjudicators from associating the visual performances with the aural performances during evaluation.

Trial Evaluation Session

Following the audiotape preparation, the investigator prepared four string faculty members from Bob Jones University to serve as adjudicators during the evaluation session; each faculty member had a minimum of four years experience teaching pre-college string classes. The adjudicators received preliminary instructions on the evaluation procedures and were provided with a copy of the adjudication form 24 hours before the evaluation session to become familiar with the statements on the form.

The investigator presided over the evaluation session and operated the audiovisual equipment with remote control units. The evaluation session consisted of two parts. During the first part, the four adjudicators were seated in an acoustically treated room and evaluated the demonstration of subjects' aural performance acuity. The adjudicators were given a folder containing the violin, viola, cello, and double bass notation of "Yankee Doodle" and eight numerically identified copies of the aural measurement of the adjudication form. Then the aural evaluation began. Before each aural performance was presented to the adjudicators, the investigator identified the performance number and instrumentation--violin, viola, cello, or double bass; this allowed the adjudicators to see the corresponding notation of "Yankee Doodle" for the performance. The adjudicators then

heard the subject's aural performance of "Yankee Doodle" through a Technic RS-B105 cassette deck and two Technic SB-L76 three-way speakers. As the adjudicators evaluated each performance, the investigator measured, with a stop watch, the amount of time necessary for evaluation. This enabled the investigator to establish optimum evaluation time for the evaluation sessions of the pilot and main studies. When all eight aural performances were evaluated, the adjudicators received a 20 minute break, during which they were not allowed to discuss any aspect of the evaluation.

After the break, the investigator prepared the adjudicators for the second part of the evaluation session dealing with the subjects' demonstration of physical performance skills. The same procedure used for the first part was employed for the second part of the evaluation. However, the adjudicators evaluated the demonstration of the subjects' physical performance skill by viewing each videotaped performance of "Yankee Doodle," without sound, on a Mitsubishi Diamond Visual 3504R 35-inch color monitor/receiver. The investigator measured, with a stop watch, the amount of time necessary for the adjudicators to evaluate each performance so that the evaluation time during the evaluation sessions of the pilot and main studies could be standardized.

Assessment of Evaluation Procedure

Responses on the evaluation forms then were summed to produce an aural, visual, and composite scores for each subject. Cronbach's coefficient alpha was used to estimate interjudge reliability among the four adjudicators. The adjudicators completed an open-ended questionnaire (Appendix D) to critique the adjudication form, evaluation session procedure, and the evaluation sessions. Based on the adjudicators' recommendations, descriptors were adjusted to enhance and clarify the adjudication form; also, the videotape recording procedure was altered in preparation for the posttest of the pilot study. Rather than using one camera to record each subject, two cameras were used and the dual angle videotapes were merged. This augmented the footage presentation during the evaluation session and allowed more time for the adjudicators to evaluate each subject's physical performance skill thereby increasing interjudge reliability.

Pilot Study

Following the trial evaluation session and the refinement of the adjudication form, the pilot study was conducted during the summer preceding the main study. The purpose of the pilot study was to test the experimental procedures using the violin modeling tapes, thereby resolving any problems before the main study. Twelve fourth-, fifth-,

and sixth-grade beginning violinists, enrolled in the Bob Jones Elementary School summer music program, participated as subjects in the pilot study. Parents of the subjects completed a questionnaire (Appendix E) assessing the availability and quality of audio and video equipment for use during practice, the location of practice as either home or school, and their child's previous formal music training and experience. The questionnaire revealed that all subjects had audio and video equipment of acceptable quality available for practicing and all subjects could practice at home.

Treatment

Subjects were assigned randomly to either group I or group II with six subjects in each group. The investigator began instructing all subjects in a violin class as sequenced in String Builder (Appendix F). As a control factor, instructions and terms presented in class coincided with those used on the modeling tapes. After one week of instruction for orientation of subjects to the proper violin positioning and posture, treatment was introduced. All subjects were required to practice with the instruction book; however, subjects in group I practiced with the guided aural modeling audiotape for violin, and subjects in group II practiced with the guided aural-visual modeling videotape for violin. A minimum practice time of 90 minutes per week, approximately fifteen minutes per day, six days per week for

10 weeks, was required of all subjects. Parents were not allowed to assist subjects during practice; however, they were required to verify practice time weekly by their signature on an assignment sheet (Appendix G). During the pilot study, two fourth-grade subjects from group II withdrew; therefore, six subjects in group I and four subjects in group II completed the pilot study.

Pilot Study Posttest

A posttest was administered at the conclusion of the 10-week treatment period; all subjects were videotape recorded performing "Yankee Doodle." In consideration of the results from the trial evaluation session, the four adjudicators recommended that the video presentation of each subject be augmented to allow for more evaluation time. Therefore, the project coordinator used two cameras rather than one camera to videotape record each subject's performance. One camera recorded the subject's full profile and the other recorded close range shots of the left and right hands, thus producing dual angle recordings. After each subject's performance was recorded, the videotapes were dubbed in sequence to a single videotape by the editor. Thus, the close shot of each subject was merged immediately following the full profile footage. As a result of using the dual angle videotape recording, the four adjudicators were able to view each performance twice, with no sound, when

evaluating the subjects' demonstration of physical performance skills.

After the videotaped performances were merged, an audiotape was dubbed from the audio segment of one original videotape. Using the same audiotape preparation procedures employed during the trial evaluation, the investigator redubbed the audiotape, randomizing the order of the subjects' aural performances.

Evaluation Preparation

The same four adjudicators who participated in the trial evaluation session before the pilot study also evaluated the subjects' performance achievement during the posttest of the pilot study. Twenty-four hours before the evaluation session, the investigator gave the adjudicators a copy of the revised adjudication form (Appendix H) and instructions on the revisions.

Aural Performance Acuity

The evaluation session for the pilot study posttest was conducted in a manner similar to the trial evaluation session preceding the pilot study, incorporating the revised procedural factors identified by the adjudicators. The investigator presided during this evaluation session, utilizing the same facilities and audiovisual equipment as used during the trial evaluation session. During the evaluation of the subjects'

demonstration of aural performance acuity, each adjudicator was given the notation of "Yankee Doodle" and eleven numerically identified copies of the aural measurement part of the adjudication form. To familiarize the adjudicators with the revisions made on the adjudication form, one trial performance was presented before evaluating the ten subjects who participated in the pilot study. Based on the minimum amount of time established for evaluation during the trial evaluation session, the adjudicators were allowed two minutes to evaluate each aural performance.

Physical Performance Skill

After all the aural performances were evaluated, the adjudicators received a 20 minute break before evaluating the subjects' demonstration of physical performance skills. Before evaluating the subjects, the adjudicators evaluated one trial performance of physical skill, thereby allowing them to become familiar with revisions made on the adjudication form and the augmented presentation of each performance. Based on the minimal time needed for evaluation during the trial evaluation session, the adjudicators were allowed three minutes to evaluate each visual performance.

Reliability Assessment

At the conclusion of the evaluation session of the pilot study, the four adjudicators completed the adjudicators'

open-ended questionnaire (Appendix I). Also, interjudge reliability was estimated by Cronbach's coefficient alpha.

Development of Viola, Cello, and Double Bass Modeling Tapes

After the pilot study, parallel scripts for the guided aural and guided aural-visual modeling tapes were written for viola, cello, and double bass. The same procedure, equipment, and technical personnel used to produce the violin guided aural and aural-visual modeling treatments also were used for the production of the viola, cello, and double bass guided modeling treatments under the same controlled conditions. The violist, cellist, and double bassist who recorded the guided modeling tapes were professional instrumentalists who have taught and performed concerts in South Carolina.

After recording, the viola, cello, and double bass videotapes were edited in exact duplication of the master violin videotape. Because of precisely controlled conditions during recording and the item-by-item reference to the documentation during editing, the viola, cello, and double bass guided modeling tapes were produced to the exact specifications of the guided violin modeling tapes. As a result, all tapes were consistent in quality, staging, narrative content, performance of exercises, audio levels, aural and visual modeling including long and close shots, and

quality of the audio and video production. After editing, five copies of the audiotape and five copies of the videotape for viola, cello, and double bass were duplicated in order to have enough copies for distribution to the subjects participating in the main study. The investigator and recording engineer previewed each of the duplicated tapes to assure that all tapes were equivalent in audio and video quality.

Conclusion of Phase I

After all the modeling tapes were completed and previewed by the investigator and recording engineer, procedural revisions were made before phase II of the study. Based on the information gathered during the pilot study, revisions were made on the subjects' practice sheet (Appendix J) in order to follow individual practice habits. Based on information obtained from the adjudicators, a final revision was made on the adjudication form (Appendix K) to increase the interjudge reliability for the evaluation session during the posttest of the main study. Descriptors were revised and added to the adjudication form, and the numerical values assigned to the responses were reversed. After the adjudication form was revised and the modeling tapes and treatment procedure were satisfactory, the main study was conducted.

Phase II: Main Study

In August, following phase I, the main study commenced. Twenty-six fourth-, fifth-, and sixth-grade students who enrolled in a beginning string class at Bob Jones Elementary School participated as subjects for the main study. Prior to the first class meeting, the investigator conducted an orientation session for the subjects and their parents to discuss the requirements and expectations of the main study. Parents signed an agreement of cooperation (Appendix L) and completed the parental questionnaire used during the pilot study.

Music Aptitude and Learning Modality

Before the first class meeting, subjects' music aptitudes and individual learning modality preferences were assessed. The music aptitude scores served as the covariate during the analysis of data. The relationships between subjects' learning modality and performance achievement scores also were determined during the analysis of data.

To assess subjects' music aptitude, Gordon's (1965) Music Aptitude Profile (MAP) was administered by an elementary music specialist over a three-day period according to the standardized procedures in the test manual. The MAP answer sheets were scored by the investigator. Reliability of the MAP range from .90 to .96 (Boyle & Radocy, 1987).

To assess subjects' individual learning modality preference, Dunn, Dunn, and Price's (1989) Learning Style Inventory (LSI) was administered by the investigator according to the standardized procedures in the test manual. With the LSI, subjects' learning modality preference was assessed and classified as either no preference, or auditory, visual, tactile/kinesthetic, or multi-modal preference (a combination of learning modalities). After all subjects had completed the LSI, the answer sheets were sent to Price Systems for scoring. For assessing learning modality preference through the LSI, Dunn, Dunn, and Price documents reliability indices ranging from .74 to .80.

Instruction and Treatment

Subjects were assigned randomly to one of three groups without considering grade, instrumentation, learning modality, or practice location--nine subjects were assigned to group I, nine subjects were assigned to group II, and eight subjects were assigned to group III. With the assistance of two proctors, the investigator instructed the subjects for fourteen weeks, three times weekly for thirty minutes each day in a traditional, heterogeneous string class. The same method book, instructional sequence, terminology, and practice requirements used during the pilot study were also used for the main study.

To establish performance foundations, the subjects were taught proper posture and positioning of their instrument and were required to practice 60 minutes per week with the instruction book during the first four weeks of instruction. On the fifth week of instruction, the 10-week treatment period began.

At the conclusion of the first instruction day during the treatment period, the subjects were separated into their respective treatment groups. The investigator instructed and demonstrated to each group the required practice procedure. All subjects were required to practice the music exercises stated on the weekly assignment sheet for a minimum of 90 minutes per week without assistance. However, subjects in group I were required to practice along with the guided aural model; subjects in group II were required to practice along with the guided aural-visual model; subjects in group III did not receive a modeling tape but were required to practice with the instruction book. On the weekly assignment sheet, all subjects were required to document the number of times they performed each assignment and the amount of daily practice time.

After the subjects were instructed on the practice procedure, they received a letter (Appendix M) for their parents describing the required practice procedure. Subjects in groups I and II also received the appropriate modeling

tapes for the treatment condition and instrumentation. All subjects practiced at home with the exception of one fourth-grade subject studying cello from group I and one fourth-grade subject studying double bass from group III who practiced at school; a cassette tape player was provided for the subject in group I. Both subjects who practiced at school were monitored, but not assisted, by the investigator.

During the treatment period, the instructions presented in class corresponded with the instructions presented on the modeling tapes. The investigator examined the subjects' signed weekly assignment sheet to ensure that they were practicing according to the required procedure. Also, subjects were reminded regularly of their appropriate practice procedure, and parents were called for additional verification of their child's practice habits. During the main study, two fourth-grade subjects who studied violin from group I and one fifth-grade subject who studied viola from group III withdrew; therefore, 23 subjects completed the study.

Main Study Posttest

After 10 weeks of treatment, a posttest was administered to the subjects. The project coordinator who operated the cameras during the production of the modeling tapes, videotape recorded each subject performing "Yankee Doodle," using the same procedure employed during the posttest of the

pilot study. After recording, the videotapes were dubbed in the same manner employed during the posttest of the pilot study, merging the long profile and close range shots of each subject's performance. In addition, an audiotape of the performances was dubbed and prepared using the same procedure employed during the audiotape preparation following the pilot study.

Evaluation Session of Main Study

Twenty-four hours before the main study evaluation session, the investigator gave the same four adjudicators a copy of the final revised adjudication form and instructions on procedural changes of the evaluation session. The final evaluation session was conducted in a manner similar to the previous evaluation session; however, to reduce measurement error due to fatigue of the adjudicators, the final evaluation session was executed in two days. The investigator presided during this evaluation session, utilizing the same facilities and audiovisual equipment.

Aural Performance Acuity

During the first day, the adjudicators evaluated the subjects' demonstration of aural performance acuity and were given the notation of "Yankee Doodle" and 24 numerically identified copies of the aural measurement part of the adjudication form. One trial performance was presented

before evaluating the 23 subjects who participated in the main study. Before each aural performance, the investigator identified the performance number and instrumentation--violin, viola, cello, or double bass. The adjudicators were allowed two minutes to evaluate each aural performance.

Physical Performance Skill

On the second day, the adjudicators evaluated the subjects' demonstration of physical performance skill in a similar manner to the evaluation of the aural performance acuity. The adjudicators were allowed three minutes to evaluate each subject's visual performance. During the two-day evaluation period, the adjudicators were not allowed to discuss any aspect of the evaluation.

Analysis of Data

Data from phases I and II were analyzed at the University of North Carolina at Greensboro employing Statistical Package for the Social Sciences (SPSS, 1988). Data treatment included descriptive statistics, reliability indices, a one-way analysis of covariance using the MAP scores as the covariate to test the null hypothesis, and multiple regression analyses to determine the relationships between subjects' performance achievement and grade, instrumentation, previous formal music lessons, and individual learning modality.

Phase I

Trial Evaluation Session

During phase I, the trial evaluation session was conducted using the two-part Likert scale adjudication form. The numerical responses from the four adjudicators evaluating the performances were summed to provide each subject with an aural score which represented aural performance acuity, a visual score which represented physical performance skill, and a composite score which served as the performance achievement score--the principal dependent variable. Treatment of data from the trial evaluation session included the mean and standard deviation of the aural, visual, and composite scores, and Cronbach's coefficient alpha, a statistical procedure to to estimate interjudge reliability (Boyle & Radocy, 1987; Hopkins & Stanley, 1981).

Pilot Study

After the evaluation session of the pilot study, the numerical responses from the adjudication forms were summed and treated in the same manner as the trial evaluation session. The mean and standard deviation were computed for the aural, visual, and composite scores, and interjudge reliability was determined by Cronbach's coefficient alpha.

Phase II

Main Study

After the evaluation session of the main study, the numerical responses from the adjudication forms were summed to provide aural, visual, and composite performance achievement scores for each subject. The mean, standard deviation, and Cronbach's coefficient alpha also were computed.

To test the null hypothesis, data from the aural, visual, and composite scores were analyzed by a one-way analysis of covariance with the subjects' MAP scores serving as the covariate to control for individual music aptitude (Roscoe, 1975). Also, the relationships between performance achievement and subjects' grade level, instrumentation, formal music instruction, and individual learning modality preference were determined independently by multiple regression analyses.

CHAPTER IV

RESULTS

Introduction

To test the null hypothesis, results from the two-phase study were collected and analyzed. During phase I, a trial evaluation session was conducted to determine interjudge reliability and the feasibility of the evaluation process to be used in the main study. Four adjudicators evaluated the audiotape and videotape of eight subjects who completed one year of class violin, viola, cello, or double bass performing "Yankee Doodle" by using a two-part Likert scale evaluation form. After the evaluation session, the scores from each adjudication form were summed. Thus, subjects received an aural score which represented aural performance acuity achievement and a visual score, which represented physical performance skill achievement, from each adjudicator. All subjects' aural and visual scores were summed to yield a composite score which served as the performance achievement score--the principal dependent variable. After summing the scores, the mean and standard deviation were computed in order to estimate interjudge reliability using Cronbach's coefficient alpha.

After the trial evaluation session, the adjudication form was revised and the pilot study of phase I was

conducted. Ten beginning violin subjects completed the pilot study and were assigned randomly to groups I or II. After the treatment period, the pilot study posttest was administered; the subjects were videotape recorded performing "Yankee Doodle." The same four adjudicators who evaluated the audiotape and videotape performance during the trial evaluation session also evaluated the audiotape and videotape performance of each subject who participated in the pilot study using the revised adjudication form. After the evaluation session, data were collected and analyzed statistically in the same manner as data from the trial evaluation session.

During phase II, the main study was conducted to determine the effects of guided aural modeling, guided aural-visual modeling, and practice only without modeling conditions, on the performance achievement of beginning string instrumentalists. Twenty-three fourth-, fifth-, and sixth-grade beginning string students who participated as subjects and completed the study were assigned randomly to one of three groups.

All subjects of the main study were administered Gordon's (1965) Music Aptitude Profile and Dunn, Dunn, and Price's (1989) Learning Style Inventory. Instruction began after testing, and treatment began four weeks later. After treatment, the subjects were videotape recorded performing

"Yankee Doodle" as the posttest. Subsequent to the posttest, the main study evaluation session was conducted over a two-day period using the same four adjudicators. After the evaluation, data were analyzed statistically in the same manner as the data from the evaluation session following the pilot study. The null hypothesis serving as the principal research objective was tested by an analysis of covariance with the subjects' MAP scores serving as the covariate. Furthermore, relationships between subjects' performance achievement and grade level, instrumentation, previous formal music lessons, and individual learning modality preference were determined by multiple regression analyses.

Treatment of the data from phases I and II of the study was conducted at the University of North Carolina at Greensboro employing the Statistical Package for the Social Sciences (1988). Alpha level was set at .05 for all statistical analyses.

Phase I

Trial Evaluation Session

Prior to the pilot study of phase I, the trial evaluation session was conducted to estimate interjudge reliability. Four adjudicators evaluated the audiotape and videotape performances of eight subjects who completed one year of class instruction studying violin, viola, cello, or double bass. After evaluating, the adjudicators responded to

items on the questionnaire (Appendix D) suggesting revisions for the adjudication form and evaluation procedure.

The cumulative score each subject could have receive ranged from 36 to 180 for the aural measurement, 84 to 420 for the visual measurement, and 120 to 600 for the composite measurement. Table 1 presents the cumulative score means, standard deviations, and Cronbach's coefficient alpha reliability indices of the aural, visual, and composite measurements.

Table 1

Trial Evaluation Session Before the Pilot Study

Cumulative Score Means, Standard Deviations, and Reliability

Measurement	Mean	SD	Reliability
Aural	101.250	32.022	.96
Visual	192.125	34.769	.84
Composite	293.375	64.318	.93

In studies regarding performance evaluation forms using the Likert scale format, for example Abeles (1972) and Cooksey (1975), a reliability of .85 and higher were considered acceptable. Indices between .75 to .84 were considered marginal, and indices below .75 were considered low and unacceptable. Based on the literature, the aural measurement reliability index of .96 and the composite

measurement reliability index of .93 from the trial evaluation session were acceptable. However, the visual measurement reliability of index .84 was marginal.

According to the information obtained from the adjudicators' questionnaire, inadequate and unfocused videotape shots, and an inadequate amount of videotape footage for evaluative decisions may have caused the low reliability of the visual measurement. The adjudicators also suggested revisions for the descriptors on the adjudication form. Based on these suggestions, the videotape recording procedure for the posttest after the pilot study was revised by adding a second camera. Both cameras were carefully adjusted to videotape record, in focus, the appropriate angles of each subject's performance. After recording, both videotapes were merged, thereby augmenting the footage for the evaluation session. In addition to the adjustments made for videotape recording, descriptors on the adjudication form were revised (Appendix H).

Pilot Study

Ten beginning violin students enrolled in a summer music program served as subjects and completed the pilot study. Subjects were assigned randomly to groups I or II. During the treatment period, subjects in group I practiced with the guided aural model, and subjects in group II practiced with the guided aural-visual model. After 10 weeks

of treatment, all subjects were administered a posttest; each subject was videotape recorded performing "Yankee Doodle" using the revised procedure. Thus, each subject was videotape recorded with two cameras, and the videotapes were both merged.

The four adjudicators who participated in the trial evaluation session before the pilot study also evaluated the performances during the evaluation session after the pilot study using the revised adjudication form. The cumulative score each subject could have received ranged from 36 to 180 for the aural measurement, 80 to 400 for the visual measurement, and 116 to 580 for the composite measurement. Table 2 presents the cumulative means and standard deviations of the aural, visual, and composite scores from the evaluation session.

Table 3 presents Cronbach's coefficient alpha indices to estimate interjudge reliability for the aural, visual, and composite measurements. An unexpected decrease occurred in the interjudge reliability from the trial evaluation session. The aural measurement reliability index of .91 was acceptable; however, the visual measurement reliability index of .77 and the composite measurement reliability index of .82 were marginal. In contrast to the trial evaluation session, the adjudicators stated in the open-ended questionnaire (Appendix I) that the augmented videotape segment of each subject extended the evaluation time to extremes, which

Table 2

Pilot Study Evaluation Session

Cumulative Score Means and Standard Deviations

Group	N	Adjudication Form		
		Aural	Visual	Composite
I: Aural Model	6			
M		104.667	195.500	299.667
SD		15.868	21.531	32.571
II: Aural-Visual Model	4			
M		118.250	224.500	342.750
SD		23.510	11.630	31.878

resulted in fatigue and thereby increased error. Also, one adjudicator stated that the order of the continuum response of the Likert scale was confusing and suggested that the numerical values should be reversed; rather than "1" representing "highly agree," "1" would represent "highly disagree." By reversing the numerical order of the continuum response, high numerical values would be assigned to high achieving performances. Based on this information, extensive study and revisions ensued resulting in a procedural change in which the evaluation session after the main study was conducted over a two-day period. Also, the adjudication form was revised by reversing the continuum response as suggested and by adding and clarifying descriptors in the visual measurement.

Table 3

Pilot Study Evaluation Session

Interjudge Reliability

Measurement	Reliability
Aural	.91
Visual	.77
Composite	.82

Phase II

Main Study

Twenty-six fourth-, fifth-, and sixth-grade students enrolled in a beginning string class and studying violin, viola, cello, or double bass participated as subjects for the main study. The subjects were assigned randomly to one of three groups. Nine subjects were assigned to group I to practice with the guided aural model; nine subjects were assigned to group II to practice with the guided aural-visual model; eight subjects were assigned to group III to practice without modeling conditions. During the main study, two fourth-grade subjects from group I and one fifth-grade subject from group III withdrew; therefore, 23 subjects completed the study.

Subjects' Classifications

Prior to the first class meeting, the subjects' parents completed the parental questionnaire. Grade level, instrumentation, and previous formal music lessons were assessed from the questionnaire of each subject. The subjects' grade level classification is presented in Table 4 and reveals the trend in the string music program at Bob Jones Elementary School. Recruitment for beginning string instrumentalists is directed initially to students in the fourth-grade. Typically, more fourth-grade students are recruited into the string program than either fifth- or sixth-grade students.

Table 4

Main Study: Grade Level of Subjects by Groups

	Group		
Grade	I	II	III
Fourth	5	8	6
Fifth	1	0	0
Sixth	1	1	1

Table 5 presents the instrument classification of subjects. During recruitment, all subjects were allowed to study the instrument of their choice. Subjects who were undecided were encouraged to study the instrument least

chosen to balance the instrumentation in the class. Three subjects were undecided and encouraged to study double bass; however, two subjects decided to study viola and one subject decided to study cello.

Table 5

Main Study: Distribution of Instrumentation Across Subjects

	Group		
Instrument	I	II	III
Violin	4	5	2
Viola	1	2	3
Cello	1	2	1
Double Bass	0	0	1

Table 6 presents the subjects' previous formal music lessons that were assessed from the questionnaire completed by subjects' parents. Because piano lessons are offered at Bob Jones Elementary School in second-grade, a majority of subjects had participated in at least one or more years of formal music lessons before studying strings. Hence, 52 percent of subjects in this sample had completed one to two years of formal music lessons and 31 percent had completed three or more years of formal music lessons.

Table 6

Main Study: Subjects' Previous Formal Music Lessons Other than Strings

	Group		
Previous formal music lesson	I	II	III
Less than 1 year	1	1	2
1 - 2 years	4	5	3
3 or more years	2	3	2

Music Aptitude and Learning Modality

Two standardized tests were administered to all subjects prior to the first class meeting. Gordon's (1965) Music Aptitude Profile (MAP) was administered over a three-day period. The scores from the MAP served as the covariate to control for variance of individual music aptitude in the post-treatment analysis. After the MAP was administered, each subject completed Dunn, Dunn, and Price's (1989) Learning Style Inventory (LSI). The LSI is a Likert scale inventory intended to reveal each subject's individual learning modality preference as no preference or auditory, visual, tactile/kinesthetic, or multi-modal preference (a combination of the modalities). Table 7 presents the subjects' modality preference and the frequency of appearance within each treatment group. The LSI classification was used

to determine if subjects' learning modality was related to their performance achievement.

Table 7

Main Study: LSI Modality Preference of Subjects

	Group		
Preference	I	II	III
No Preference	2	6	2
Auditory	1	2	0
Visual	2	0	2
Tactile/Kinesthetic	0	1	1
Visual & Tactile/Kinesthetic	2	0	1
Auditory & Tactile/Kinesthetic	0	0	1

Main Study Descriptive Statistics

After 10 weeks of treatment, the subjects were administered the posttest and videotape recorded performing "Yankee Doodle." Using the final revised adjudication form, the evaluation session was conducted over a two-day period with the same four adjudicators who, by this time, were familiar with the evaluation process. On the final revised adjudication form, the adjudicators responded to nine statements on the aural measurement and 22 statements on the visual measurement. As a result, the composite score was predominantly weighted by the visual measurement rather than weighted equally between the two measurements. This

weighting was created intentionally in order that the adjudication form would have content validity with the modeling tapes and the instruction presented in class. Hence, the cumulative score each subject could have received ranged from 36 to 180 for the aural measurement, 88 to 440 for the visual measurement, and 124 to 620 for the composite measurement. Table 8 presents the cumulative means and standard deviations of the aural, visual, and composite measurements.

Table 8

Main Study Evaluation Session

Cumulative Score Means and Standard Deviations

		Adjudication Form		
Group	N	Aural	Visual	Composite
I: Aural Model	7			
M		118.143	285.000	403.143
SD		30.861	27.140	51.566
II: Aural-Visual Model	9			
M		112.667	298.222	410.889
SD		25.764	50.252	71.584
III: No Model	7			
M		101.143	291.143	392.286
SD		76.123	36.779	45.680

Without controlling for individual music aptitude by the covariate, group I, who practiced with the aural model,

had a higher unadjusted mean when compared to groups II or III. Group II, who practiced with the aural-visual model, had a higher unadjusted visual mean when compared to groups I and III. Groups II and I, respectively, had a higher unadjusted composite mean when compared to group III. Based on comparing the unadjusted composite means, no detrimental effects were apparent from using the modeling tapes.

Cronbach's coefficient alpha indices to estimate interjudge reliability are presented in Table 9. The interjudge reliability increased when compared to the previous evaluation session (Table 3); therefore, the revisions of the evaluation procedure and adjudication were effective. The aural, visual, and composite reliability indices of .96, .85, and .90 respectively were acceptable for the study as supported by the literature (Abeles, 1972; Cooksey, 1975).

Table 9

Main Study Evaluation Session

Interjudge Reliability

Measurement	Reliability
Aural	.96
Visual	.85
Composite	.90

Principal Research Objective

The purpose of this study was to determine if guided aural modeling, guided aural-visual modeling, or practice without modeling conditions had an effect on the performance achievement of beginning string instrumentalists. The null hypothesis tested is stated: There is no significant difference in performance achievement as a result of practice conditions under three levels of experimentation--guided aural modeling, guided aural-visual modeling, and no modeling conditions. Data were analyzed by a one-way analysis of covariance with subjects' MAP scores serving as the covariate.

Results of the one-way analysis of covariance comparing subjects' aural performance acuity achievement as evaluated by the four adjudicators using the aural measurement of the adjudication form, is presented in Table 10. A significant relationship ($p < .05$) was found between subjects' MAP scores and aural measurement scores. Thus, the covariate statistically controlled for the variance of music aptitude among the subjects in order that each treatment group could be equal. As a result, no significant difference (F (2,19) = 2.815; $p > .05$) was found among the three experimental groups' adjusted means. Therefore, the independent variable of practice conditions had no significant effect on subjects' aural performance acuity achievement.

Table 10

One-Way Analysis of Covariance

Practice Conditions on Aural Performance

Acuity Achievement

Source	Sum of Squares	Mean Square	df	F	p
Covariate					
MAP	8592.649	8592.649	1	14.517	.00*
Treatment	3332.544	1666.272	2	2.815	.08
Between	11925.193	3975.064	3		
Within	11246.111	591.901	19		

*$p < .05$

Results of the one-way analysis of covariance comparing subjects' physical performance achievement as evaluated by the four adjudicators using the visual measurement of the adjudication form, are presented in Table 11. A significant relationship ($p < .05$) was found between subjects' MAP scores and visual measurement scores. Thus, the covariate statistically controlled for the variance of music aptitude among the subjects in order that each treatment group could be equal. As a result, no significant difference (F (2,19) = .22; $p > .05$) was found among the three experimental groups' adjusted means. Therefore, the independent variable of practice conditions had no significant effect on subjects' physical performance achievement.

Table 11

One-Way Analysis of Covariance

Practice Conditions on Physical Performance

Achievement

Source	Sum of Squares	Mean Square	df	F	p
Covariate					
MAP	15300.690	15300.690	1	10.558	.00*
Treatment	352.339	176.170	2	.122	.89
Between	15653.030	5217.677	3		
Within	27533.927	1449.154	19		

*$p < .05$

The composite measurement, which was a summation of the aural and visual scores of the adjudication form, indicated subjects' performance achievement--the principal dependent variable. The results from the one-way analysis of covariance that tested the null hypothesis are presented in Table 12. A significant relationship ($p < .05$) was found between subjects' MAP scores and composite measurement scores. Thus, the covariate statistically controlled for the variance of music aptitude among the subjects in order that each treatment group could be equal. When comparing the performance achievement of subjects who practiced with the guided aural model, guided aural-visual model, and no modeling conditions, no significant difference was found ($F(2,19) = 1.030$; $p > .05$). Therefore, the null hypothesis

that served the principal research objective was retained. There was no significant difference in the performance achievement of beginning string instrumentalists as a result of practice conditions under three levels of experimentation--guided aural modeling, guided aural-visual modeling, and no modeling conditions.

Table 12

One-Way Analysis of Covariance

Practice Conditions on Performance Achievement:

Principal Dependent Variable

Source	Sum of Squares	Mean Square	df	F	p
Covariate					
MAP	46825.715	46825.715	1	16.482	.00*
Treatment	5851.441	2925.720	2	1.030	.38
Between	52677.156	17559.052	3		
Within	106656.609	4848.028	19		

*$p < .05$

Secondary Research Objective

In addition to determining the effects of the treatment on performance achievement, the following questions regarding the relationship of subjects' performance achievement scores to other variables served as the secondary research objective.

1. Is there a significant relationship between performance achievement and subjects' grade level?

2. Is there a significant relationship between performance achievement and subjects' instrumentation?

3. Is there a significant relationship between performance achievement and subjects' previous formal music lessons?

4. Is there a significant relationship between performance achievement and subjects' learning modality preference?

To determine the relationships between subjects' performance achievement and grade level, instrumentation, previous music lessons, and learning modality, and the variance of the dependent variable attributed to grade level, instrumentation, previous music lessons, and learning modality, multiple regression analyses were conducted. Table 13 presents the results of these analyses.

Relationships between subjects' grade level and the aural, visual, and composite scores ranged from .06 to .23. Furthermore, the variance attributed to grade level on the aural, visual, and composite scores ranged from less than one percent to five percent. No significant relationships were found between grade level and subjects' aural, visual and composite scores.

Relationships between subjects' instrumentation and the aural, visual, and composite scores were .41, .32, and .31 respectively. The variance in the aural, visual, and composite scores attributed to instrumentation ranged from

Table 13

Multiple Regression Analyses to Determine Relationships Between Performance Achievement and Grade, Instrumentation, Previous Music Lessons, and Learning Modality

Variable	R	R^2	F	p
Grade level				
Aural	.23	.05	.58	.57
Visual	.10	.01	.10	.90
Composite	.06	.00	.33	.97
Instrumentation				
Aural	.42	.18	1.35	.29
Visual	.32	.10	.73	.54
Composite	.31	.09	.66	.58
Previous Music Lessons				
Aural	.58	.34	5.14	.02*
Visual	.37	.13	1.56	.23
Composite	.42	.17	2.10	.15
Learning Modality				
Aural	.52	.27	1.25	.33
Visual	.48	.23	1.00	.45
Composite	.52	.27	1.24	.33

*$p < .05$

9 percent to 18 percent. No significant relationships were found between instrumentation and subjects' aural, visual, and composite scores.

A relationship between subjects' previous formal music lessons and aural scores was .58 and 34 percent of the variance of the aural scores was attributed to previous music

lessons. This isolated relationship was significant ($F = 5.14$; $p < .05$). However, relationships of .37 and .42 were found between the visual and composite scores and subjects' previous formal music lessons. The variance of the visual and composite scores attributed to previous music lessons were 13 percent and 17 percent respectively. No significant relationships were found between the visual and composite scores and previous music lessons.

Relationships between subjects learning modality preference and the aural, visual, and composite scores ranged from .48 to .52. Variance of the dependent variable attributed to learning modality ranged from 27 percent to 23 percent; however, no significant relationships were found between the subjects' learning modality preference and the aural, visual or composite scores.

Summary

During phase I, the trial evaluation session was conducted to determine the feasibility of the evaluation process and estimate interjudge reliability by Cronbach's coefficient alpha. Four adjudicators evaluated eight string subjects using the two-part adjudication form designed by the investigator. The aural measurement reliability index of .96 and the composite measurement index of .93 were acceptable. The visual measurement reliability index of .84 was marginal. In order to increase interjudge reliability, descriptors in

the adjudication form were revised and the videotape recording procedure was altered for the posttest of the pilot study.

A second evaluation session was conducted after the pilot study. Interjudge reliability indices decreased slightly when compared to the previous evaluation session, due possibly to adjudicators' fatigue. The aural measurement reliability index of .91 was acceptable; however, the visual measurement reliability index of .77, and the composite measurement reliability index of .82 were marginal. To increase reliability, the adjudication form was revised and the evaluation session after the main study was conducted over a two-day period.

Phase II was the main study to determine the effects of guided aural modeling, guided aural-visual modeling, or practice without modeling conditions on the performance achievement of beginning instrumentalists. The posttest was administered after 10 weeks of treatment, and the final evaluation session was conducted to determine performance achievement for the 23 subjects. Cronbach's coefficient alpha reliability indices for the aural, visual, and composite measurements were .96, .85, and .90 respectively; thus, the interjudge reliability was acceptable for the study.

The null hypothesis that served the principal research objective of the study is stated: There is no significant

difference in performance achievement of beginning string instrumentalists as a result of practice conditions under three levels of treatment--guided aural modeling, guided aural-visual modeling, and no modeling conditions. Data collected from the evaluation session of the main study were analyzed by the one-way analysis of covariance with subjects' MAP scores serving as the covariate and the alpha level set at .05. Significant relationships ($p < .05$) were found between the subjects' MAP scores and the aural, visual, and composite measurement scores. Thus, when testing the null hypothesis, the covariate statistically controlled for the variance of music aptitude among the subjects in order that each treatment group could be equal. No significant effect was found; therefore, the null hypothesis was retained. Modeling conditions had no significant effect on the performance achievement of beginning string instrumentalists.

In addition to testing the null hypothesis, the relationships between subjects' performance achievement and grade level, instrumentation, previous formal music lessons, and learning modality preference were investigated using multiple regression analyses to satisfy the secondary research objective. No significant relationships were found between performance achievement and subjects' grade level, instrumentation, and learning modality. An isolated significant relationship of .58 ($p < .05$) was found

between the subjects' aural measurement and previous music lessons. Also, 34 percent of the variance of the aural measurement was attributed to subjects' previous music lessons. No significant relationships, however, were found between the visual and composite measurements and subjects' previous music lessons.

CHAPTER V

SUMMARY AND CONCLUSION

Summary

The purpose of this two-phase study was to determine if guided aural or guided aural-visual modeling had a significant effect on the performance achievement of beginning string students. Both phases of the study were conducted using fourth-, fifth-, and sixth-grade string instrumentalists as subjects. During phase I, guided aural and guided aural-visual modeling tapes of Applebaum's String Builder, Book 1, for violin were produced, a two-part Likert scale adjudication form was designed and tested, a pilot study was conducted, and companion guided aural and guided aural-visual modeling tapes of String Builder, Book 1, were designed from the violin tapes for viola, cello, and double bass. During phase II, the main study was conducted to test the null hypothesis: There is no significant difference in performance achievement as a result of practice conditions under three levels of experimentation--guided aural modeling, guided aural-visual modeling, and no modeling conditions.

The main study was conducted during the semester following the pilot study. Twenty-three beginning string instrumentalists participating as subjects were administered Gordon's (1965) Music Aptitude Profile and Dunn, Dunn, and

Price's (1988) Learning Style Inventory. After being tested, subjects were assigned randomly to one of three treatment groups and received instruction on basic string performance from the investigator in a heterogeneous string class. After four weeks of instruction, the 10-week treatment period began; group I practiced with the guided aural model, group II practiced with the guided aural-visual model, and group III practiced without modeling conditions.

The posttest was administered immediately following the treatment whereby each subject was videotape recorded performing "Yankee Doodle." These recorded performances were evaluated by four adjudicators using the two-part Likert scale adjudication form. Hence, each subject received an aural score which represented the adjudicators' evaluation of aural performance acuity a visual score which represented the adjudicators' evaluation of physical performance skill, and a composite of both scores which represented performance achievement--the principal dependent variable. Interjudge reliability indices were estimated by Cronbach's coefficient alpha. The null hypothesis serving the research objective was tested by a one-way analysis of covariance with the subjects' MAP scores serving as a covariate. Because no significant effect was found ($p > .05$), the null hypothesis was retained. Modeling conditions had no significant effect on the performance achievement of beginning string instrumentalists.

Data were analyzed further by multiple regression to determine if there were significant relationships between subjects' performance achievement based on the aural, visual and composite scores, and grade level, instrumentation, previous formal music lessons, and learning modality. No significant relationships were found between the aural, visual, and composite scores and subjects' grade level, instrumentation, and learning modality. An isolated significant relationship of .58 ($p < .05$) was found between the aural measurement and subjects' previous music lessons with 34 percent of the aural score variance attributed to previous music lessons. The relationships of the visual and composite scores and previous formal music lessons, however, were not significant.

Conclusions

Principal Research Objective

The principal research objective for this study was to determine if practice conditions under three levels of experimentation, guided aural modeling, guided aural-visual modeling, and no modeling conditions, would have a significant effect on the performance achievement of beginning string instrumentalists. The results revealed that the modeling conditions investigated in this study did not significantly influence the performance achievement of beginning string instrumentalists.

The findings of this present study are congruent with the findings in studies by Biggs (1960), Arant (1970), Anderson (1979), Burgess (1974), and Rees (1976) regarding supplemental and self-instructional modeling conditions by audiotape and videotape. In these studies, as in this present study, subjects who practiced with modeling conditions did not demonstrate significantly superior performance achievement when compared to subjects who practiced without modeling conditions. From the results of the present study, however, no significant detrimental effects were identified from practicing with the modeling conditions. Furthermore, the data presented in Table 8 of the preceding chapter reveal that the composite measurement means of group II which used the guided aural-visual model and group I which used the guided aural model, were higher when compared to the composite mean of group III which used no modeling conditions. Therefore, modeling conditions used in this study could be considered as a viable supplement to traditional practice procedures for beginning string instrumentalists.

Although this study satisfies the principal research objective, there are important factors to consider other than the treatment conditions which may have contributed to the outcome. A treatment period of 10 weeks may not have been sufficient to maximize the experimental conditions on subjects' performance behaviors. Furthermore, a sample of 23

in a heterogeneous string class possibly may have affected the internal validity by having an imbalance of instrumentation that may have changed the distribution.

Another factor which may have contributed to the outcome was that extra time and effort were required from the subjects in groups I and II to rewind and listen to the modeling tapes. Hence, during practice, subjects in these groups performed the music exercises less as compared to subjects in group III. However, the results of this factor is still unknown.

Although subjects in the experimental group agreed to practice with the modeling conditions, practice time away from school could not be monitored by the investigator to ensure that the tapes were used correctly. Therefore, an assumption was made that the parental verification on the weekly assignment sheet accurately reflected the subjects' practice habits. Furthermore, it was not possible to control the extent to which the subjects attended or focused on the information presented through the modeling tapes during practice.

Secondary Research Objective

The secondary research objective of this study was to determine the relationships between performance achievement scores and subjects' grade level, instrumentation, previous formal music lessons, and learning modality preference. Data

from the subjects' aural, visual, and composite scores assigned by the four adjudicators during the evaluation session after the main study were treated by multiple regression analyses to determine these relationships.

No significant relationships were found between performance achievement scores and grade level. Therefore, the variance of grade levels accounted for by the sample, fourth-, fifth-, and sixth-grade, was not of considerable importance. No significant relationships were found between subjects' performance achievement scores and instrumentation. Therefore, the variance of instrumentation accounted for by the sample, violin, viola, cello, and double bass, was not of considerable importance.

A significant relationship of .58 ($p < .05$) was found between the aural scores which represented the adjudicators' evaluation of subjects' aural performance acuity achievement and previous formal music lessons. Although this significant result is one isolated case among 12 analyzed relationships, discussion is warranted. Since aural performance acuity encompasses rhythmic stability and dynamic sensitivity, a logical assumption is that subjects who studied music formally on another instrument for one year or more would have developed a sensitivity to these elements when compared to subjects with less or no previous formal music lessons. No significant relationship, however, was found between the

subjects' visual scores which represented the adjudicators' evaluation of physical performance achievement and previous formal music lessons. Furthermore, no significant relationship was found between subjects' performance achievement, based on the composite score, and previous formal music lessons. Therefore, subjects' previous formal music lessons had a minimal relationship on performance achievement.

The individual learning modality preferences represented in this sample included subjects who had no learning modality preference and auditory, visual, tactile/kinesthetic, visual and tactile/kinesthetic, and auditory and tactile/kinesthetic preferences. Although the relationships between subjects' learning modality preference and the aural, visual, and composite scores were .58, .42, and .52 respectively, no significant relationships were found. Therefore, the variance on learning modality accounted for by the sample was not of considerable importance in this study.

Recommendations for Future Research

As a result of the proliferation of audiovisual supplements in contemporary American society, publishers continue to produce modeling tapes as part of instructional packages. Published research on the effectiveness of modeling through audiovisual aids, however, is limited. Among the published research, there is substantial evidence

of contradictory results from research on modeling effectiveness in music education. Furthermore, research on the effects of modeling on the performance achievement of string instrumentalists have been complicated by the limited number of string instrumentalists available as subjects and the heterogeneity of instruments and sometimes grade levels represented in a class. However, through further research viable conclusions on the effectiveness of modeling conditions on performance achievement may be realized.

The present study revealed areas that should receive attention in future research. A replication of the current study should be conducted with the following recommendations.

1. All subjects in a sample should study the same instrument, such as violins. A homogeneous string class would eliminate the need to produce multiple modeling tapes.
2. The sample size should be larger than 23 with subjects preferably from one grade level. A recommended sample size for a study with three experimental groups should range between 30-45 subjects (Bruning & Kintz, 1977). A larger sample size consisting of one instrument and grade level would also eliminate empty cells and allow flexibility with statistical analyses.

3. The treatment period should be longer than 10 weeks, preferably throughout a school year. A long treatment period should maximize the experimental conditions.
4. Stringent controls over subjects' practice habits including length of practice time, accountability, and use of equipment, should be applied to minimize the possibility of inconsistency of treatment.
5. Technologically advanced audiovisual equipment, such as compact and laser disc players, synthesizers, or computers, should be used to present the modeling treatment.

The five considerations stated above should refine future research into the effectiveness of modeling conditions on the performance achievement of beginning string instrumentalists. Through replication of this study, findings can provide empirical information on methods of out-of-class practice to supplement elementary string instruction and other areas in music education.

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APPENDIX A

SCRIPT FOR VIOLIN GUIDED MODELING TAPE OF APPLEBAUM'S STRING BUILDER, BOOK 1

SCRIPT FOR VIOLIN GUIDED MODELING TAPE OF

APPLEBAUM'S STRING BUILDER, BOOK 1

LESSON 1: Open String Quarter Notes

Page 1

Please tune your instrument...A...D...G...E

From pages 3-7 you will not use your left hand; therefore, you can concentrate on posture, proper bow hold, and bowing. For now, stand-up or sit-up straight but stay relaxed. Hold your violin by cupping your left hand around the body of the instrument near the neck on the side of the E string. Bring the violin up and place it on your shoulder. Lower your jaw on to the chin rest but keep your head straight. Your left elbow should be underneath the violin and not touching your body. Also, the instrument should tilt slightly toward the right. You are now ready to play with a good posture.

Let's look at line 1, "The D String." Rest your bow on the D string in the middle of the bow and check your right hand position. Is your thumb bent? Is your fifth finger curved and perching on the stick? Are your other fingers curved and leaning forward? Bend your right wrist as you are bow to draw a straight bow stroke. Sit-up or stand-up straight but relax. Maintain a good posture. For now, the quarter note will receive one beat. Be ready to play? (Count).

Good. Second line. (Count).

Look at line 2 on this page, "The A string." Draw your bow parallel to the bridge and listen for a full tone. Make sure your instrument is resting on your shoulder and your left elbow is underneath the instrument. Ready to play? (Count).

Second line. (Count).

Good. Let's look at line 3, "The D and A Strings." Read your notes. Check your bow hold. Are you maintaining a good posture? Sit-up or stand-up straight. First line. (Count).

Second line. Read your music. (Count).

3a. Check your how hold. Make sure your thumb is bent, your fifth finger is curved and perching on the stick, and your other fingers are curved and leaning forward. Now look at line 3a and be ready to play. (Count).

Let's turn to page 4

And let's now look at line 4, "The G string." You'll need to use lots of right arm weight when playing on the G string. And don't forget to raise your right arm. Now, check your bow hold. Remember to draw straight bows by bending your wrist as you bow. Hold the violin on your shoulder and keep your left elbow underneath the instrument. (Count).

G...Straight bows

Second line. Make sure you are using enough arm weight. (Count)

Good work. Now look at number 5 on page 4, "Three Strings." Read your notes carefully and listen to your tone. Don't slouch. Are you ready
to play? (Count).

D...A...D...G

The next line is, "Starting on A." Remember, the quarter note receives one beat. Hold your violin on your shoulder. Your left elbow should be underneath the violin. (Count).

Good. Let's look at line 6, "The E String." Check your right hand position on your bow. Is your thumb bent? Is your fifth finger curved and perching on the stick? Are your other fingers curved and leaning forward? Bend your wrist as you bow. (Count).

Second line, ready. (Count).

Good job. Look at line 7. Play the right notes. Maintain a steady rhythm. Are you bending your right wrist as you bow? Pivot your arm as you cross strings. (Count).

"The Other Way." Check your posture. Don't slouch. (Count).

Good work.

LESSON 2: Open String Half and Whole Notes

Page 5

Please tune your instrument...A...D...G...E

In 4/4 time the half note receives two beats and the whole note receives four beats. When playing, draw long, slow, and straight bow strokes, making sure that the bow is moving parallel to the bridge. Before you start playing, check your posture and hand positions. Keep your left hand cupped on the left side of the instrument and place the instrument on your shoulder. Place your jaw on to the chin rest. Make sure your left elbow is underneath the instrument. Sit-up or stand-up straight as you play.

Now let's look at line 8, "The D String and the A String." Check your bow hold. Is your thumb bent? Is your fifth finger curved and perching on the stick? Are your other fingers curved and leaning forward? Remember to bend your right wrist to draw a straight bow stroke. Keep counting (Count).

1...2...3...4...1...2...3...4

Good. Second line. Listen to your tone. (Count).

Good work. Now look at 8a, "The G String." Remember, when playing on the G string you'll need more arm weight while bowing. Hold your instrument up and make sure your left elbow is underneath the instrument. (Count).

Good tone.

Second line, "The E String." Remember, the half note receives two beats. Listen to your tone. Remember to bend your right wrist while bowing. Don't slouch. (Count).

Good. Now let's look at line 9, "Playing with Our Teacher." We are ready to play our first duet. Keep a steady beat and read your notes. Draw long and straight bows and remember to bend your right wrist. For duets, I will play the student part, then I will play the teacher part, and you may play the student part with the teacher part. Check your bow hold. Is your right thumb bent and your fifth finger curved and perching on the stick? Are your other fingers curved and leaning forward? (Count).

Teacher part. Now, keep counting. (Count)
1...2...3...4...

Good job. We'll do another duet when we play line 10 "Play Ball." Use a lot of right arm weight for the G string notes. Sit-up or stand-up straight. Hold your violin on your shoulder. Ready? (Count)

Good. Teacher part. Keep your rhythm steady and play with a good tone. (Count).

Very nice playing.

Now let's turn to page 6

Line 11, "Whole Notes." A whole note receives 4 beats in 4/4 time. Use a slower, longer bow when playing whole notes than when playing half notes. Maintain a good posture and bow hold. Bend your right wrist as you bow. Keep counting. (Count).

Down...2...3...4...Up...2...3...4

Good work. Second line. Play with a full tone. (Count).

Look at line 12 on page 6, "Two Halves and a Whole." Sustain the half note for two beats and sustain the whole note for four beats. Draw long straight bow strokes. Are you bending your right wrist? Is your right thumb bent and your fifth finger perching on the stick? Are your other fingers curved and leaning forward? Hold your instrument on your shoulder. Read your music. Ready? (Count).

1...2...3...4...1...2...3...4...full tone.

Good. Now, number 13 is another duet, "Our Theme Song--Lightly Row." Keep the rhythm steady. Listen to your tone. Don't slouch. Hold your instrument on your shoulder and keep your elbow underneath your instrument. (Count).

Good. Now the teacher part. (Count).

You are sound good. Look at line 14 on page 6, "One Long and Four Short Notes." Whole notes should be played with slow bow strokes and the quarter notes should be played with fast bow strokes. Check your bow hold. Is your thumb bent? Is your fifth finger perching on the stick of the bow. Are your other fingers curved and leaning forward? Remember to bend your wrist to draw straight bow strokes. (Count).

The second line is, "Four Shorts and One Long." Remember to count. Hold your violin on your shoulder and keep your left elbow underneath the violin. Remember that when playing on the G string, you'll need more arm weight. (Count).

Good. Let's look at line 15. In the second measure there is a whole note rest. A whole note rest receives four counts. You must not play during the whole note rest. (Count).

1...2...3...4...1...2...3...4...1...2...3...4

I hope you were counting. Let's look at line 16 on this page, "Mary Had a Little Lamb." Count the rest. Check your bow hold. Bend your right wrist so you can draw straight bow strokes. Sit-up or stand-up straight. Ready? (Count).

Rest...2...3...4...Rest...2...3...4...Rest...2...3...4

Good work.

We are on page 7

Look at line 17, "The Whistle." Make sure you count. Check your bow hold. Is your thumb bent? Is your fifth finger resting curved and are your other fingers curved and leaning forward? Don't slouch. Hold your instrument on your shoulder. Make sure your left elbow is underneath your violin. Play with a full tone. Ready? (Count).

1...2...3...4...1...2...3...4...1...2...3...4...off

Good work. Line 18, "Pierrot." Check your posture. Are you holding your violin up? Is it resting on your shoulder? Bend your right wrist as you bow. Remember to watch your music and keep counting. (Count).

1...2...3...4...1...2...3...4...1...2...3...4...off.

Let's look at line 19 on page 7, "Bobbie Shafto." The half rest in measures two and six receives two counts. Remember to count the rest. Read your music. Ready? (Count).

Good. Look at line 20. "Baa! Baa! Black Sheep." Remember to count through the rests. Remember to rock your arm according to the open string that you are playing. Hold your instrument on your shoulder and keep your left elbow underneath your instrument. Check your bow hold. Bend your right wrist as you are bowing. Ready? (Count).

Rest...rest...rest...rest...rest...rest...rest...rest

Good. Line 21, "Hot Cross Buns." Now you will be combining half notes and quarter notes in one piece. Remember, a quarter note receives a shorter bow stroke than a half note. Sit-up or stand-up straight. Keep counting. (Count).

O. K. Line 22, "Who is Thumbkin?" The two slanted lines in measure four means to lift your bow, then place your bow at the frog so you will be ready to play the next measure down-bow. You will have to lift your bow quickly, but don't stop counting. Check your bow hold. Is your right thumb bent? Is your fifth finger perching on the stick? Are your other fingers curved and leaning forward? (Count).

Lift

Look at line 23, "Merrily We Roll Along." Bend your wrist as you play. Don't slouch. Hold your instrument on your shoulder and keep your left elbow underneath your instrument. Play with a full tone. (Count).

One...two...rest...rest

Good work. Look at line 24 on this page, "Old King Cole". Remember, the slanted lines in measure four means that you lift the bow and place it at the frog. Keep playing with a full tone and maintain a good posture. Ready? (Count).

Lift...four...one...two...rest...rest.

Good work. You should hear improvement in your playing.

Lesson 3: First Finger on the A and D strings.

Page 8

Please tune your instrument...A...D...G...E

Now you will use your left fingers. Make sure the neck of your instrument rest above the base knuckle of you index finger and the first crease of your thumb. Keep your fingers relaxed, curved, and hovering over your strings. The palm is placed away from the neck of the instrument. Keep your left elbow underneath the instrument. In order for you to play in tune, at least for now, you need to place your fingers on the correct tapes. If you continue to do this, you will be able to place your fingers correctly without tapes. Also, listen to the pitches and tone. Make sure you play with a full tone. Continue to check both left and right hand positions and posture.

Now, let's start by looking at number 25 on page 8, "A New Tone." The first finger pitch on the D string is E. Before playing this piece, place your left first finger down on the first finger tape on your D string. You now found E. Check your left hand position. Keep the other fingers hovering over the strings, even when the first finger is placed on the D string. Make sure your palm is away from the neck of the violin. Now, lift your first finger off the string just enough so that the finger is not touching the D string. Now you are ready to play this piece. Don't slouch. Hold your instrument on your shoulder and keep your left elbow underneath the violin. (Count).

1st

Second line. Make sure the first finger lands right on the tape. (Count).

1...2...3...4...off

Good. Look at line 26 on page 8, "In Space". Read your music and keep counting. Check your bow hold. Make sure your right thumb is bent, your fifth finger is curved and perching on the stick and your other fingers are curved and leaning forward. Bend your right wrist as you bow. And remember to place the first finger right on the tape. Ready? (Count).

The teacher part. Keep counting. (Count).

Good work. Line 27 on page 8, "Our Theme Song." Lift the bow when you see the double lines in the second and fourth measures. Check your left hand position. Is the neck of the instrument above the base knuckle of your index finger and the first crease of your thumb? Is the palm of your hand away from the neck? Are your fingers curved and hovering over the string? Make sure your left elbow is underneath your violin. Play with a good tone. (Count).

Lift...lift...1...2...3...4

Line 28. "Etude." This piece begins with your first finger down. Remember, the quarter note is played with short bow strokes. Hold your violin on your shoulder and don't slouch. Make sure your first finger is place on the first finger tape. Ready? (Count).

Rest...rest.

"A Funny Thing." Check your left hand position. Is the neck resting above the base knuckle of your index finger and the first crease of your thumb? Is your palm away from the neck of your instrument and your left elbow underneath your instrument? Are your other fingers hovering over the strings? Remember, place your first finger on the tape and don't hold the neck of the instrument in the palm of your hand. Continue to play with a good tone. (Count).

Rest...rest...rest...rest

Now look at line 29 on page 8, "The First Finger Game on D." Remember to keep counting. Sit-up or stand-up straight. Hold the violin on your shoulder and place your elbow underneath the violin. Check your bow hold and remember to bend your right wrist to draw a straight bow stroke. Place your first finger on the tape. And remember, play with a full tone. Ready? (Count).

Lift...lift

Good work.

Now we're on page 9

Look at line 30, "Giant Steps." Check your left hand position. Is the neck of the instrument resting above the base knuckle of the index finger and the first crease of your thumb? Is the palm away from the neck of the violin? Are the fingers curved and hovering over the strings. Is your instrument resting on your shoulder. Read your notes as you play along. And don't forget to bend your right wrist as you are bowing. Ready? (Count).

Look at "A Falling Star." The quarter note will be played with a faster bow stroke than the half note. Hold your violin on your shoulder and keep your left elbow underneath your instrument. Don't slouch. Ready? (Count).

Good. Now we'll get to play another duet when we play line 31, "The Crunchy Cookies." Check your bow hold. Is your thumb bent? Is your fifth finger curved and perching on the stick? Are your other fingers curved and leaning forward? Play with a full tone and make sure that you place your first finger on the first finger tape. Use long, slow bow strokes for half notes and fast, short bow strokes for quarter notes. Bend your right wrist as you bow. (Count).

Rest...rest

Now the teacher part will be played. Keep counting and keep playing with a full tone. (Count).

Good. Let's look at line 32, "Our First Stunt." You will be making a "tunnel" with your left first finger. The lines after "1" and underneath the notes in the second, third, and fourth measures indicate that you must keep your first finger down on the D string while you play the open A string. Make sure your finger is not touching the A string. Try it...Make sure you maintain a relaxed and curved left hand position with the palm of your hand away from the neck of the instrument. Hold your instrument on your shoulder and sit-up or stand-up straight. Now we will play. (Count).

Tunnel...lift...rest...rest

Good work. You'll get to practice that again when we play line 33, "Playful Puppies." Make a "tunnel" with your first finger when you see the line. Check your bow hold and make sure your thumb is bent, your fifth finger is perching curved on the stick, and the other fingers are curved and leaning forward. Hold your violin on your shoulder and keep your elbow underneath the instrument. Maintain a good posture. Ready? (Count).

Rest...rest...rest...rest...tunnel...rest...rest...
rest...rest...rest...rest

Line 34, "Bobby Shafto." Check your left hand position. Make sure your first finger is placed right on the first finger tape. (Count).

Lift...tunnel

Look at line 35, "Skip to My Lou." Play with a full tone. Bend your right wrist to draw a straight bow. Don't slouch and don't forget to make the tunnels. (Count).

Good. Now, turn to page 10

Look at line 36, "A New Tone--The First Finger on the A String." When you place a first finger on the A string, you will sound a B. Place your finger on the first finger tape of the A string while maintaining a good left hand position. Make sure the neck of the violin is resting above the base knuckle of your index finger and the first crease of your thumb. Keep your palm away from the neck and keep your free fingers curved and hovering over the strings. Hold your instrument on your shoulder and keep your elbow underneath the instrument. Remember to play with a full tone. (Count).

Good work. Second line. Full tone. (Count).

Good. Look on page 10, number 37, "The Tired Camel." Check your bow hold. Is your thumb bent? Is your fifth finger curved and perching on the stick? Are your other fingers curved and leaning forward? Bend your right wrist as you play. Ready? (Count).

Rest...rest

The teacher part. Keep a steady beat. (Count).

Rest...rest

Look at line 38, "Our Theme Song (On the A string)." Hold your violin on your shoulder and keep your elbow underneath the instrument. Check your left hand position. Make sure your first finger lands on the first finger tape and keep your palm away from the neck of the instrument. Sit-up or stand-up straight and remember to play with a full tone. Ready? (Count).

Rest...rest...rest...rest.

Good work. Look at number 39, "The First Finger Game on A." Remember, a quarter note receives a fast bow stroke. Bend your right wrist as you bow. And remember, play with a full tone. (Count).

Lift...lift.

Good work. Now look at number 40, "Baa! Baa! Black Sheep." In this piece, you will be playing on the D, A, and E strings. Read your music and place your fingers on the correct tape. Remember your left hand position and make sure the palm is away from the neck of the violin. The fingers should be curved and hovering over the strings. Don't slouch. Ready? (Count).

Good. Now we're ready to play line 41, "Now It's Easy." Play with a good tone. Check your bow hold and make sure your thumb is bent, your fifth finger is curved and perching on the stick, and your other fingers are curved and leaning forward. Bend your right wrist when you bow. (Count).

Rest...rest...rest...rest...rest...rest.

Good job.

LESSON 4: The High Second Finger

Page 11

Please tune your instrument...A...D...G...E

You are ready to play with a high second finger. When a high second finger is placed on the D string, you should sound an F-sharp. Place your first finger on the D string and your second finger on the D string. Both fingers should be placed on the corresponding tapes. The distance between the first finger E and the second finger F-sharp is a whole step. Keep your palm away from the neck of the instrument, and make sure your fingers are curved and hovering over the strings. Make sure your left elbow is underneath the violin.

Number 42. Play with a good tone. Hold your instrument on your shoulder and maintain a good posture. Check your bow hold and make sure the thumb is bent, the fifth finger is curved and perching on the stick, and the other fingers are curved and leaning forward. Bend your right wrist to draw a straight bow. And remember to place your fingers on the right tapes. Ready? (Count).

1...2...3...4...1...2...3...4...off

Second line. (Count).

Rest...rest

Good work. Look at line 43, "The F-sharp Finger Game." Check your left hand position. Is the neck of the instrument resting above the base knuckle of the index finger and the first crease of the thumb? Is the palm away from the neck of the instrument? Are the fingers curved and hovering over the strings? Remember to count during the rests. And remember to place your fingers on the correct tapes. (Count).

Lift...lift

Good work. Number 44, "At a Party." When a note is sharped, it remains sharp throughout the measure. Play with a steady rhythm. Hold the violin on your shoulder and keep your left elbow underneath the violin. Don't slouch. And remember to place your fingers on the correct tapes. Ready? (Count).

Rest...rest...rest...rest

Let's continue with line 45, "Mary Had a Little Lamb." Before you begin to play this piece, place your first finger and second finger down on the D string on the correct tapes. Keep your palm away from the neck of the instrument and keep your other fingers curved and hovering over the string. Are you ready to play? (Count).

Rest...rest

Look at line 46, "Skip a Step." When you place a high second finger down for the F-sharp, place the first finger down also. If you continue to do this, eventually you will be able to find your F-sharp without placing your first finger. (Count).

Rest...rest.

Teacher part. Keep counting. (Count).

Rest...rest.

Look at line 47, "Cock-A-Doodle-Doo." Keep counting. Bend your right wrist to draw a straight bow. Check your posture and hand positions. Sit-up or stand-up straight. And remember to place your fingers on the correct tapes. (Count).

Rest...rest.

Good. Let's turn to page 12

Look at line 48. When a high second finger is placed on the A string, a C-sharp will sound. Be sure to place the second finger right on the high second finger tape of your fingerboard. Keep bending your right wrist as you bow and listen to your tone. Ready? (Count).

1...2...3...4...1...2...3...4

Second Line. Keep playing with a full tone. (Count).

Rest...rest

Now it's time to look at number 49, "Second in Line." Check you left hand position. Is the neck of the instrument resting above the base knuckle of your index finger and first crease of your thumb? Is your palm away from the neck of the violin? Are your fingers curved and hovering over the string? Hold your instrument on your shoulder and don't slouch. Now be ready to play. (Count).

1...2...rest...rest.

Good work. Look at line 50, "The C-sharp Finger Game." Make sure you relax and your first and second fingers are placed on the correct tapes. Check your bow hold. Bend your right thumb. Make sure the other fingers are curved and leaning forward. (Count).

Good work. Look at line 51, "The Finger Mixer." In the third and fourth measures, keep your second finger down and make a "tunnel." Maintain a curved and relaxed left hand position. Don't slouch. (Count).

Tunnel...3...4

52. "The Family Gathering." Be sure to bend your right wrist as you bow. Hold your violin on your shoulder and keep your left elbow underneath your instrument. Play with a full tone and remember to place your fingers on the correct tapes. Ready? (Count).

Rest...rest

Teacher part. Keep a steady beat. (Count).

Rest...rest

Good. Look at line 53. Check your left hand position. Is the palm away from the neck of the instrument? Are your fingers curved and hovering over the strings. Make sure you place your first and second fingers of your left hand on the correct tapes. (Count).

1...2...3...4

Good. Now let's look at page 13.

Number 54. "Theme--The New World Symphony." The half rest in measures four and eight receives two beats. Also, when playing the fourth measure remember to lift your bow off the string after playing the half note and start the fifth measure with a down-bow. Make sure your right thumb is bent, your fifth finger is curved and perching on the stick of your bow, and your other fingers are curved and leaning forward. Now be ready to play. (Count).

Lift...rest...rest.

Good. Look at line 55, "Merrily We Roll Along." Draw straight bow strokes by bending your right wrist. Play with a full tone and good intonation by placing your fingers on the correct tapes. Sit-up or stand-up straight and hold your violin on your shoulder. (Count).

Rest...rest.

Look at line 56, "Gaily the Troubadour." Check your bow hold. Is your thumb bent? Is your fifth finger curved and perching on the stick? Are your other fingers curved and leaning forward? Hold your violin up on your shoulder and keep your left elbow underneath the instrument. Ready? (Count).

Rest...rest...rest...rest.

Good. Look at line 57, "A Chinese Garden." Are your left hand fingers relaxed, curved, and hovering over the strings of the instrument? Is your palm away from the neck of your instrument? Make sure you place your fingers on the correct tapes. And remember to play with a full tone. (Count).

Rest...rest

Teacher part. Keep a steady beat. (Count).

Rest...rest

Good. Now it's time to play number 58, "A Finger Mixer." Hold your instrument on your shoulder. Don't slouch and keep your left elbow underneath the violin. Remember to place your fingers on the right tapes. (Count).

Good. Let's look at, "A String Mixer." In this piece, you will be crossing strings. Remember to let your bow arm rock according to the string you play. Keep your bow arm relaxed and maintain a good bow hold. Bend your right wrist as you bow. (Count).

Good. Look at line 59, "Au Claire de la Lune." Check your posture and left hand position. Your palm should be away from the neck of the instrument. The fingers should be curved and hovering over the strings. Be sure to place your fingers down on the correct tapes. And remember to play with a full tone. Ready? (Count).

Lift...rest...rest.

You've done good work.

LESSON 5: The Third Finger

Page 14

Please tune your instrument...A...D...G...E

You will now play with your third finger on the D and A strings. When you place your third finger on the third finger tape on the D string, you will sound a G. When you place your third finger down on the third finger tape on the A string, you will sound a D. In both situations, the third finger should be placed next to your high second finger. When your fingers are next to each other, you have a half-step.

Let's look at line 60. As you play this piece, make sure your left hand is relaxed and your palm is away from the neck. Keep your fingers curved and hovering over the strings. When you place your third finger down on the third finger tape, it should be next to the second finger. Hold your violin on your shoulder and don't slouch. Play with a full tone. Now be ready to play line 60. (Count).

Rest...rest.

Look at, "Melody on D." Check your bow hold. Is your thumb bent? Is your fifth finger curved and resting on the stick of your bow? Are your other fingers curved and leaning forward? Bend your right wrist as you bow. Ready? (Count).

Rest...rest.

Now, look at line 61, "Jumping Beans." Make sure your first, second, and third fingers are placed on the correct tapes. Sit-up or stand-up straight and hold the violin on your shoulder. Make sure your left elbow is underneath your violin. Ready? (Count).

Now we're ready to play another duet. Look at line 62, "Off to School." The comma in measure four means to pause slightly before you continue to play. Play the note before the comma a little shorter. Keep your bow on the string during the pause. Check your left hand position. Your palm should be away from the neck of the violin and your fingers should be curved and hovering over the strings. Don't forget to keep your fingers relaxed. Ready? (Count).

Rest...rest.

Teacher part. (Count).

Rest...rest.

Good. Look at the last piece of this page, line 63, "Our Theme Song--Lightly Row." Remember to pause slightly when you see the commas. Bend your right wrist as you draw your bow. Keep your left elbow underneath the violin and don't slouch. Play with a full tone. Ready? (Count).

Rest...rest...rest...rest

Now let's look at page 16

And look at number 64. The third finger placed on the A string will produce a D. This third finger should be placed next to the high second finger, C-sharp. Remember to keep your left palm away from the neck of the instrument and make sure your fingers are curved and hovering over the strings. Place them on the correct tapes. Now, let's play number 64. (Count).

Rest...rest

Look at, "Melody on A." Don't slouch. Hold the violin on your shoulder and keep your left elbow underneath your violin. Play with a full tone.
(Count).

Rest...rest

Good. Number 65, "The Space Ship." Check your bow hold. Is your thumb bent? Is your fifth finger curved and perching on the stick of the bow? Are your other fingers curved and leaning forward? Remember to bend your right wrist as you bow. Ready? (Count).

Rest...rest

Teacher part. Keep a steady beat. (Count).

Rest...rest

Good. Look at line 66, "The Pet Shop." Stand-up or sit-up straight. Place your violin on your shoulder and play with a full tone. Remember to place your fingers on the correct tapes. (Count).

Rest...Rest

Good. Look at line 67, "The Cuckoo." Check your left hand position. Is your palm away from the neck of the violin? Are your fingers curved and hovering over the strings? Make sure your fingers are placed right on the correct tapes. Ready. (Count).

Rest...rest.

Now let's play "Twinkle, Twinkle, Little Star," number 68. Remember to pause slightly when you see the commas. Bend your right wrist as you draw your bow. Keep your left elbow underneath the violin and don't slouch. Play with a full tone. (Count).

Page 16

Look at line 69, "Now We Will Dance." Check your bow hold and make sure your thumb is bent, your fifth finger is curved and perching on the stick, and the other fingers are curved and leaning forward. Bend your right wrist as you bow. Make sure your fingers are placed on the correct tapes. Ready? (Count).

Good. Look at line 70, "London Bridge is Falling Down." Sit-up or stand-up straight. Hold your violin on your shoulder. Check your left hand position and make sure your palm is away from the neck of your violin and your fingers are curved and hovering over the strings. Remember to play with a full tone. Ready. (Count).

Rest...rest.

Now it's time to play, "Old MacDonald had a Farm." Look at line 71. Don't slouch. Place your fingers on the correct tapes and make sure your left palm is away from the neck of the violin. Ready? (Count).

Rest...rest...rest...rest...1...2...rest...rest.

Good. Look at line 72, "A Thanksgiving Song." Are you bending your right wrist? Keep a good hand position. Sit-up or stand-up straight. Ready? (Count).

Rest...rest...rest...rest.

Let's continue and play line 73, "An Octave Apart." Check your bow hold. Is your thumb bent? Is your fifth finger curved and perching on the stick? Are your other fingers curved and leaning forward. Remember that when you play on the G string, you need lots of arm weight. Now let's play number 73. (Count).

Rest...rest...3...4.

Number 74, "Sea Shells." Your left hand should be relaxed. Your palm should be away from the neck of the instrument and your fingers should be curved and hovering over the strings. Make sure your fingers are placed on the correct tapes. Ready? (Count).

Rest...rest.

Teacher part. Keep a steady beat. (Count).

Rest...rest.

Good job.

LESSON 6: The Ties and Slurs

Look at page 17

Please tune your instrument...A...D...G...E.

You will be introduced to the tie and the slur. A tie is a rhythmic element; two of the same notes are played in one bow stroke and counted as one note. A slur is a bowing element; two or more of different notes are connected and played in one bow stroke.

Now, look at line 75, "The Tie." Two C-sharps are tied together in the second measure; therefore, the C-sharp is sustained for three beats. Keep a steady beat as you play. (Count).

One...two...three...four...one...two...three...four... rest...rest

Look at the second line, "The Same Melody." In the second measure a dotted half note is introduced. A dot after a note adds one half of its value to that note; thus, the C-sharp in measure two receives three beats. Let's play it. (Count).

One...two...three...one...two...three...rest...rest.

Look at line 76, "The Slur." The first two notes in every measure are slurred. Mentally divide the bow in half and play those notes in the same bow stroke. Check your posture and hand positions. (Count).

Down...up...down...up...down...up...down...up...down... up...down....up...down...up...down...up.

Good. Look at line 77, "Smooth Sailing." Hold your violin on your shoulder and keep your left elbow underneath the violin. Check your bow hold and make sure your thumb is bent, your fifth finger is curved and perching on the stick of the bow, and your other fingers are curved and leaning forward. Follow the bowings carefully. Ready? (Count).

Down...up...Down-bow...up-bow...down...1...2...rest... rest.

Teacher part. Keep and steady beat. (Count).

Rest...rest.

Good. Look at line 78, "Long, Long Ago." Check your left hand and make sure your palm is away from the neck of the violin, and your fingers are curved and hovering over the strings. Follow your bowings carefully. Bend your right wrist as you bow. Play with a full tone. Don't slouch. Ready? (Count).

Lift...down...up...down...up...up...rest...rest... down...down...up...down...lift...down...up...down... up...1...2...3...4...1...2...off.

Look at line 79, "Jingle Bells." In measures 3 and 11 you must make a "tunnel" with your high second finger in order to slur to the open A string. Maintain a good left hand position as your fingers are placed on the correct tapes. Keep the rhythm steady and play with a full tone. Ready? (Count).

Rest...rest...down...up...tunnel.

LESSON 7: The G String

Page 18

Please tune your instrument...A...D...G...E

Now you will play notes on the G string.

Look at line 80 on page 18. When bowing on the G string, you will need lots of right arm weight. Stand-up or sit-up straight. Hold your violin on your shoulder and keep your left elbow underneath the violin. Play with a full tone. Ready? (Count).

Rest...rest...tunnel...rest...rest.

Second Line. Keep playing with a full tone. (Count).

Rest...rest...rest...rest.

Good work. Look at number 81, "The Quarter Rest." A quarter rest receives one beat. There is a quarter rest in measures 4 and 8. Make sure you don't play during the rest. Now, hold your violin on your shoulder and be ready to play. (Count).

Tunnel...rest...rest.

Look at line 82, "Thoughts of Christmas." Check your bow hold. Make sure your thumb is bent, your fifth finger is curved and perching on the stick of the bow, and your other fingers are curved and leaning forward. Be sure to follow the bowings. Play with lots of arm weight. Ready? (Count).

Down...down...up...down...rest...rest.

Good work. Look at line 83, "Good Morning!" Check your left hand position. Is your palm away from the neck of the instrument and are your other fingers hovering over the strings. Don't slouch. Remember to place your left fingers right on the tapes. Play with a full tone. (Count).

Down...up...down...up...down...up...rest...rest.

<u>It's time to play page 19</u>

Look at number 84, The second finger on the G string is a B. It is a whole step away from the first finger A. Remember to place your fingers on the correct tapes. Bend your right wrist as you bow and use lots of right arm weight. Ready? (Count).

Off.

Good. Look at line 85, "The Tap Dancer." This piece is in 3/4 time; there are 3 beats in a measure and the quarter note receives one beat. You should count, "1...2...3...1... 2...3." Remember to keep a steady beat and count the rest. Be ready to play. (Count).

Rest...rest...rest...rest...rest...rest...rest...1... 2...3...1...rest...rest...1...2...3...1...rest...rest... rest...rest...rest...rest.

Let's continue with line 86, The third finger placed on the G string is a C. It is a half step away from the B. Is your palm away from the neck of the violin? Are your fingers curved and hovering over the strings. Remember to place your left fingers on the correct tapes. Ready? (Count).

Rest...rest.

Now, it's time to play another duet. Look at line 87, "Under the Sea." Bend your right wrist as you bow. Use enough arm weight when you play on the G string so you can produce a full tone. Ready? (Count).

1...2...3...4.

Teacher part. Ready? (Count).

Rest...rest...rest.

Look at line 88, "Watching the Sheep." Check your bow hold. Is your thumb bent? Is your fifth finger perching on the stick? Are your other fingers curved and leaning forward? Follow the bowings and play with a full tone. Ready? (Count).

Down...down...up...down...up...2...rest...rest.

LESSON 8: The Low Second Finger

Page 20

Please tune your instrument...A...D...G...E

Now, you will be playing with a low second finger. When you place your left second finger low, it will touch the first finger; thus, the first finger and a low second finger is one half step away from each other. A low second finger placed on the D string will sound an F and a low second finger placed on the A string will sound a C.

Please look at number 89 on page 20. In the third measure, I will stop to give you time to slide your second finger next to your first finger. Ready? (Count)...high 2...now slide your second finger back close to the first finger...Ready to continue to play...(Count)...rest...rest.

Second line. We'll do the same thing. Ready? (Count)...now slide the second finger back close to the first finger...Ready? (Count)...one...two...rest...rest.

Now, look at line 90, "Nelly Bly." You will play with a low second finger on the D and A strings. When you play with a low second finger, the third finger will feel like a stretch. Make sure your third finger is placed on the third finger tape. Maintain a good posture and hand positions. Follow your slurs. Ready? (Count).

Down...up...low 2...1...low 2...3...1...low 2...rest... down...up...down...up...up.

Good. Look at line 91. "Cradle Song." Remember to hold the dotted half note for three beats. Be ready to place a low second finger next to the first finger. Hold your violin up on your shoulder and keep your left elbow underneath the violin. Now let's play line 91. Ready? (Count).

One...two...three...lift...one...two...three...low 2... 3...low...3...one...two...three...one...two...three... rest.

Good work. Look at line 92, "The Half Step March." In this piece you will be sliding your second finger from a low to a high to a low position. Keep your left hand relaxed. Make sure the palm of your left hand is away from the neck of the instrument and your fingers are curved and hovering over the strings. Play with a full tone. Ready? (Count).

Rest...rest...rest...rest.

Good work.

<u>Now, let's look at page 21</u>

Look at line 93, "Playing Three Notes in the Same Bow Stroke." Check your bow hold. Make sure your thumb is bent, your fifth finger is perching on the stick, and your other fingers are curved and leaning forward. Bend your right wrist as you are bowing. In this piece, you will have to slur three beats in one bow. And remember, you will be counting three beats per measure. Ready? (Count).

Down...up...rest...rest

Now in the second line you will be placing low second fingers for F naturals. Ready? (Count).

2...3.

Let's continue with line 94, "Thoughts of You." This piece is in 3/4. You will place a low second finger on the A string, but you will place a high second finger on the D string. Don't slouch. Ready? (Count).

Down...up...1...2...3...1...2...3...low 2...1...1...2...
3...1...rest...rest

Let's look at line 95, "Blow That Man Down." The first note in this piece is called an "up-beat." This count is subtracted from the last measure. I will count one full measure and then the measure that you will enter. Ready? (Count).

One...two...off

Good work. Line 96, "The Violas and Cellos Play on the C String." Remember, a low second finger is placed next to the first finger. Hold your violin on your shoulder and keep your left elbow underneath your violin. Bend your right wrist as you bow. Play with a full tone. Ready? (Count).

Second line. Follow the bowings. Count three beats per measure. and watch the slurs. (Count).

Rest

Good. Now turn to page 22

Look at line 97. The first finger placed on the first finger tape on the E string is an F-sharp. Now, check your bow hold. Make sure your thumb is bent, your fifth finger is curved and perching on the stick of the bow, and your other fingers are curved and leaning forward. Remember to place your fingers in the correct place. Bend your right wrist as you play. Play with a full tone. Ready? (Count).

Rest...rest...rest...rest

Let's continue with line 98, "Monkey in His Cage." This piece is in 3/4. Remember to follow your bowings. Now, check your left hand and make sure your palm is away from the neck of the violin and your fingers are curved and hovering over the strings. Play with a full tone.
Ready? (Count).

1...2...3.

Good work. Look at line 99, "Dream Waltz." The dots mean to repeat. You are to repeat the sections between the two sets of dots. This is in 3/4 so count three beats per measure. And watch your bowings. (Count).

Repeat...rest...repeat...rest

Look at number 100 on page 22, "Pony Ride." This piece is a duet for two students, so you can play both parts. Remember to follow the repeat signs. Be sure to play the correct high second and low second fingers. Sit-up or stand-up straight. Are you ready to play? First part. (Count).

2...3...repeat...2...3...4...2...3...repeat...2...3...4

Second student part. Ready? (Count)

2...3...4...2...3...4...2...3...repeat...2...3...4...
2...3...4...2...3...4...2...3...repeat...2...3...4

Good job. Now let's look at page 23

Number 101. "The Second Finger on the E String." A low second finger placed on the E string will sound a G. Remember to place the low second finger next to the first finger. Maintain a good posture and make sure your left palm is away from the neck of the instruments and your fingers are curved and hovering over the strings. Now let's play 101 with a nice tone. Follow your repeats. (Count).

Repeat

Good. Look at number 102, "A Wise Old Owl." Check your bow hold and make sure that your thumb is bent, your fifth finger is curved and perching on the stick, and your other fingers are curved and leaning forward. Remember to play the up-beat. I will count one full measure and then the measure that you will enter. Are you ready to play? (Count).

Good. Let's continue with number 103, "The Third Finger on the E String is an A." The third finger on the E string is an A. It is placed on the tape, a whole step away from the low second finger. Remember, the third finger will feel like a stretch away from the low second finger. Hold your violin on your shoulder and don't slouch. Ready? (Count).

Good. Now let's continue with number 104, "The Lonesome Cowboy." This piece is in 3/4 so there will be three beats per measure. Ready? (Count).

1...2...off

Look at line 105, "Happy Go Lucky." Remember to play the repeat. Watch for the comma in measure eight. Bend your right wrist as you bow and play with a full tone. Ready? (Count).

2...3...repeat...2...3...4

Good. Now it's time to look at page 24

Look at line 106. An F natural on the E string is played with a low first finger--close to the nut. When the first finger is placed close to the nut, there is a half step between the open E string and the F. There is a whole step between the F and the second finger G, and there is a whole step between the G and the third finger A. Now we will play the first measure, and during the second measure, I will give you time to slide the first finger back to the nut. Look at 106 and be ready to play. (Count)...Now slide the first finger back close to the nut...let's continue to play...(Count).

Rest.

Second line. Make sure you play an F natural and F sharp when needed. Ready? (Count).

low 1...high 1...F sharp...F natural...rest

It's time to play another duet. You can play both parts of number 107, "Above the Clouds." When playing the top line, place a low first finger on the E string to sound an F, but don't let your other fingers move down with the first finger. Follow your repeats. Are you ready to play? (Count).

1...2...rest...repeat...3...4

Second part. Use more arm weight when you play on the G string. Ready? (Count).

2...3...repeat...1...2...rest...rest.

Good work. Now, look at number 108, "The Criss-Cross Fingering." Quite often when playing the violin, you will have to place a high first finger on one string and a low first finger on another string, or a low second finger on one string and a high second finger on another string. Your fingers must be ready to make adjustments for high and low placement. This piece will help you make that adjustment. In the first four measures you will place high and low first fingers and in the next four measures you will place low and high second fingers. Maintain a good left hand position with your palm away from the neck of the instrument and your other fingers curved and hovering over the instrument. Are you ready to play number 108? (Count).

High...low...low...high...low...high

Now, in number 109, "Caterpillar." you will have a chance to practice the high and low placements. Look at number 109. In the third measure, you will have to place a low first finger on the E string, then a high first finger on the A string, a third finger on the A string, and then a low first finger on the E string again. Place your fingers in the correct place and follow your bowings. Play with a good tone Be ready to play number 109. (Count).

Low 1...3...high 1...low 1.

Good job.

LESSON 9: Dynamics and Phrasing

Page 25

Please tune your instrument...A...D...G...E

You will now play with dynamics and phrasing. When playing dynamics, you have to answer several questions. How much arm weight should be used? How much bow should be used? Where should the bow be placed, at the upper half or the lower half and near the fingerboard or near the bridge?

Number 110, "Playing in the Snow." This piece is marked forte; play with long bow strokes and lots of arm weight. Place the bow close to the bridge. In measure eight there is a comma; pause slightly before you continue to play. Maintain good posture and hand positions. Are you ready to play? (Count).

Rest

Now, let's continue with line 111, "The Clock Tower." This piece is marked piano. Play this piece with the bow close to the fingerboard. Play in the upper half of the bow with little arm weight. Are you ready to play? (Count).

1...2...repeat...1...2...3...off

Good. Now look at number 112. A ritardando is marked in the third to the last measure; it means to slow down gradually. Play the dynamics marked at the beginning and the commas marked at the end of phrases. Follow your bowings carefully. Ready? (Count).

Slow down now...1...2...3...off

Good. Look at number 113, "Old Hundredth." Remember to maintain a good posture and proper left and right hand positions. Place your fingers in the correct place. Play forte and play with a good, full tone. Watch the repeat. (Count).

Repeat.

Good. Let's have some fun now and play number 114, "My Pet Pony." Check your bow hold and make sure your thumb is bent, your fifth finger is curved and perching on the stick, and your other fingers are curved and leaning forward. Follow the bowings and play with a full tone. Watch your repeat. (Count).

Rest...rest...rest...rest...rest...rest...repeat...up... down...up...down...up...down...up

Good work.

LESSON 10--Left hand pizzicato.

Page 26

Please tune your instrument...A...D...G...E

When a small cross is written over a note, you must play a left hand pizzicato.

Look at number 115, "The Fourth Does the Picking." You will play this whole piece with a left hand pizzicato using your fourth finger. Hold the violin up on your shoulder and play this piano. Ready? (Count).

2...3...4

Good. Now, look at number 116, "Chop Sticks." In the first half of this piece you will bow and play forte. In the second half you will use a left hand pizzicato and play piano. Sit-up or stand-up straight. Now, be ready to play number 116. (Count).

2...3

Good work. Now, look at line 117, "A Maypole Dance." When you play the pizzicato with your left hand, just lift your bow slightly to clear the string so you can place it back on the string to play the next note. This piece should be played forte. Use lots of arm weight and bow close to the bridge. Ready? (Count).

Repeat

Good playing. Now, let's continue with number 118, "Smooth Slurring." The word "arco" means to play with your bow. You will play left hand pizzicatos in the last two measures. Follow the bowings and the dynamics. Play with a full tone. Ready? (Count).

Rest...rest

Good. Let's continue with number 119, "Snowflake." Check your left hand position and make sure the palm is away from the neck of your instrument and your fingers and curved and hovering over the strings. Hold the violin on your shoulder and keep your elbow underneath your instrument. Follow the dynamics and play this piano. (Count).

Repeat

Nice playing.

LESSON 11: The Fourth Finger

Page 27

Please tune your instrument...A...D...G...E

Sometimes, rather than playing an open string you will be required to play the same note by placing your fourth finger on the fourth finger tape, a whole step away from the third finger. When you use your fourth finger, you may have to bring your left elbow toward you right arm. If your fourth finger is placed on the correct tape on the G, D, or A strings, it should sound like the next high string. Listen to the fourth finger on the D string...listen to the open A, it sounds the same...listen to the fourth finger on the A string...that's an E...listen to the open E. Remember to place the fourth finger right on the fourth finger tape.

Now, look at number 120, "Right Hand Pizzicato." When a piece or a section of a piece is marked "p-i-z-z," you need to play that piece or section pizzicato with your right hand. Remember, to use a fourth finger rather than an open string when marked. This piece is marked piano. Ready? (Count).

2...3...4...2...3...4...repeat...4...2...3...4...4...
2...3...4

Good work. You'll get to practice some more with, "The Happy Ghost." This piece is played pizzicato as well. Play it piano. Remember to place the fourth finger on the correct tape. Maintain a good posture and hand positions. (Count).

4...4...rest...4...rest

Now it's time to play number 121, "The Puppet." "Arco" means to use your bow. Check the dynamic markings. Be sure to play the left hand pizzicato in the last two measures. Are you ready to play? (Count).

Good work. It's time to play number 122. Check your left hand position and make sure your palm is away from the neck of the instrument and your fingers are hovering over the string. Make sure your left elbow is underneath the violin. Play the dynamics and play with a good, full tone. Ready? (Count).

Forte...piano...forte

Look at number 123, "The Wagon Wheel." A fourth finger placed a whole step away from the third finger on the E string is a B. Check your bow hold and make sure your right thumb is bent, your fifth finger is perching on the stick, and your other fingers are curved and leaning forward. Play this forte. Ready? (Count).

Low 1...repeat...rest

Now we can play a duet. Look at number 124, "Blue Butterflies." Play your dynamics. Place your fingers in the correct place. Hold your violin on your shoulder and don't slouch. Play your repeats. Ready. (Count).

2...3...repeat...four...forte...2...3...4

Second part. Keep a steady beat. (Count).

2...3...4...2...3...4

Turn to page 28

"Yankee Doodle," number 125. Follow the bowings and fingerings. Play the dynamics. Bend your right wrist as you bow and play with a full tone. Ready? (Count).

4...4...down...up...low 1...high 1...piano...forte...down bow...rest

Let's continue to play number 126, "The Bean Stalk." Play this piece pizzicato and piano. Follow the repeat. Place your fingers in the correct place. Watch the fourth fingers. Ready? (Count).

4...4...repeat

Good work. Now, let's play number 127. "Vesper Hymn." In this piece you will use your fourth finger quite a bit. Make sure the fourth finger is placed on the fourth finger tape. Bring your left elbow underneath your instrument and follow your bowings. Ready? (Count).

Rest

Number 128, "Faith of Our Fathers." This piece is in 3/4. You will slur three notes in one bow. Bend your right wrist as you bow. Remember your dynamics and follow the ritardando in the last two measures. Ready? (Count).

Forte...1...2...3...1...2...3...off

Good work. Number 129. "The Cobbler." Check your bow hold. The fifth finger should be curved and perching on the stick, and the other fingers should be curved and leaning forward. Remember to place a high 2nd fingers for F-sharp and low second fingers for C on the A string and G on the E string. Ready? (Count).

Rest...rest

You sound good.

LESSON 12: Building a Scale

Page 29

Please tune your instrument...A...D...G...E

Eight notes played going up in step is called a scale. A scale is constructed with a half-step between the 3rd and 4th notes and the 7th and 8th notes.

Look at number 130, "The First Half of a Scale." Notice that between the E and F there is a half step. The E and F are the 3rd and 4th notes of a C major scale. Check your left hand position and make sure your palm is away from the neck of the violin and your fingers are curved and hovering over the strings. Don't slouch. Now let's play number 130 and play all the repeats. Ready? (Count).

Repeat

Now, look at line 131, "The Second Half of the Same Scale." Notice that between the B and C there is a half step. The B and C are the 7th and 8th degree of a C major scale. Sit-up or stand-up straight. Make sure your violin is on your shoulder and your elbow is underneath the instrument. Remember to follow the repeats. Are you ready to play? (Count).

Repeat

Now, look at line 132, "Putting the Two Halves Together." Now you will play the C major scale going up. Place your fingers in the correct place and play with a good, full tone. (Count).

Look at number 133, "The C Major Scale--Up and Down." Now you will play the scale in half notes. Check your bow hold. Is your thumb bent? Is your fifth finger curved and resting on the stick? Are your other fingers curved and leaning forward? Bend your right wrist as you bow. Play with a full tone. (Count).

Good work. Now, look at number 134, "An Overnight Hike." This duet is written in C major. In C major, there are no flats or sharps in the key signature. Be sure to place a half step between the E and F on the D string, and the B and C on the A string. Follow your bowings and follow the repeats. Ready? (Count).

Repeat...2...3...4...repeat...2...3...4

Second part. Keep a steady beat. Ready? (Count).

Repeat...repeat...2...3...4

Good job.

LESSON 13: Eighth Notes

Page 30

Please tune your instrument...A...D...G...E

You will play eighth notes. Eighth notes receive half the value of quarter notes, that is, they receive one half of a beat. We will count eighth notes as "1 & 2 & 3 & 4 &." Because the eighth notes only receive one half of a beat, they are played with less bow that a quarter note.

Look at number 135. "Twinkle, Twinkle, Little Star." This piece is written as before except you must follow the dynamics and ritardando. Maintain a good posture. Hold your violin on your shoulder and make sure your left elbow is underneath the instrument. Now be ready to play. (Count).

Piano...now 4th finger

Now look at number 136, "Twinkle Twinkle, Little Star (in 8th notes)." Each note is repeated in eighth notes and played twice as fast as quarter notes. Use less bow when playing eighth notes than when playing quarter notes. Two measures will be counted before you play, one as usual with quarter notes receiving one beat and one counted in eighth notes. Then you may play. Ready? (Count).

1...&...2...&...3...&...4...&...1...&...2...&...3...&...
4...&...1...2...&...3...off

Now look at number 137, "Lightly Row (in 8th notes)." Prepare your fourth finger by placing the other fingers on the D string as written in the preparation measure. Remember to count eighth notes. Ready? (Count).

1...&...2...&...3...&...4...&...1...2...3...4...1...&...
2...&...3...&...4...&...1...2...3...4

Good. Now we're on page 31

Look at line 138, "Eight Notes Combined with Quarter Notes." You will have to combine the quarter notes and eighth notes. The rhythm throughout this piece is "1, 2 & 3, 4 &." Draw a long bow for the quarter notes and a short bow for the eighth notes. Remember to bend your right wrist as you bow. Play with a good, full tone. Ready? (Count).

1...2...&...3...4...&...1...2...&...3...4...&...1...2...
3...4

Good. Now we'll play a duet using eighth notes and quarter notes. Look at line 139, "The Game Starts." Make sure you play the difference between the quarter notes and eighth notes. Check your left hand position and make sure your palm is away from the neck of the instrument and your other fingers are curved and hovering over the string. Don't slouch. This piece is in 3/4. Ready? (Count).

1...2...&...3...1...2...&...3...1...2...3...1...2...&...
3...1...2...&...3...1...2...3...1...2...repeat...1...
2...3

Second part. Keep a steady beat. Ready. (Count).

Rest...rest...2...3...rest...rest...2...3...1...2...3...
rest...1...2...3...1...1...1...1...1...1...2...3...1...
rest...1...rest...rest...rest...2...repeat...1...rest...
rest...rest...rest...1...rest...rest

Now, look at number 140, "The Spooks." Play this piece pizzicato and piano. Remember to place the fourth finger right on the tape. Ready? (Count).

4...rest...rest

Number 141 is another duet, "In the Cave." Bend your right wrist as you bow. Place your left fingers in the correct place. Ready? (Count).

4...rest...repeat...4...1...2...rest...rest

Second part. Keep counting. (Count).

2...3...repeat...1...2...rest...rest

Turn to the final page of this book, page 32

Look at line 142, "The Magician." Follow the rhythms carefully. Ready? (Count).

1...2...repeat...rest...rest...rest...repeat...rest... rest.

Line 143, "Polka." This piece is in 2/4; there are two beats per measure and the quarter note receives one beat. Ready? (Count).

1...&...2...&...repeat...1...&...2...&

Second part. Keep a steady beat. Ready? (Count).

Repeat...1...&...2...&...1...&...2...&...1...&...2...&

Good job. Look at line 144, "Bow to Your Partner." This is the final piece of the book. Count and play your dynamics. Play with good posture hand positions. Ready? (Count).

1...&...2...&...3...&...4...rest...rest...rest

You made it.

APPENDIX B

REQUEST AND PERMISSION FROM CPP/BELWIN, INCORPORATE

Bob Jones University
School of Fine Arts
Greenville, SC 29614
May 18, 1991

License and Permission
CPP/Belwin, Inc.
15800 N. W. 48th Avenue
Miami, FL 33014

To Whom It May Concern:

I would like to request permission to use Samuel Applebaum's String Builder, Book I for violin, viola, cello, and double bass (copyright 1960) for my doctoral dissertation study which will be conducted from May, 1991 to December, 1991. If permission is granted, I will produce guided audiotapes and videotapes (approximately 12 of each) of the exercises in the book and distribute them to the students participating in the study at no cost. Each student will be required to purchase his or her own copy of String Builder, Book I.

In addition, I would like to photocopy "Yankee Doodle" from the violin, viola, cello, and double bass parts of String Builder, Book 1. The photocopies will be included as part of the adjudication form for the study.

If you would like further information regarding the study, please do not hesitate to write or call at (803) 242-5100. I will appreciate your prompt reply.

Sincerely,

Susan Quindag

CPP/Belwin, Inc.

popular • classical • sacred • MUSIC • instrumental • choral • keyboard

June 21, 1991

Susan Quindag

RE: EXCERPTS FOR DISSERTATION

Dear Ms. Quindag:

This letter serves as your permission to include various music excerpts from String Builder One, Samuel Applebaum as part of your research for your doctoral dissertation entitled: AN INVESTIGATION OF GUIDED ORAL VS. GUIDED ORAL/VISUAL MODELING ON THE PERFORMANCE ACHIEVEMENT OF BEGINNING STRING STUDENTS.

This permission is limited to the terms of your request dated, May 18, 1991, and does not authorize the inclusion of the material in any other form, for distribution otherwise, free or for charge.

The permission is granted on a non-exclusive basis and your shall afford all credits as they appear on the source materials. The permission fee for your use shall be ten dollars ($10.00) due upon receipt of this letter.

Please acknowledge the receipt and acceptance of the permission by affixing your signature in the indicated space below. Please retain one copy for your records and return the other for our files.

Thank you for your interest in our publications.

Cordially,

Rick Esteves
Permissions Assistant
License/Permissions

/re

Received & Accepted:

Susan Quindag

15800 N.W. 48th Avenue • P.O. Box 4340 • Miami, Florida 33014 • (305) 620-1500 • Fax (305) 621-4869

APPENDIX C

ADJUDICATION FORM FOR THE TRIAL EVALUATION SESSION

ADJUDICATION FORM FOR THE TRIAL EVALUATION SESSION

PART 1 (AS: ____)

AURAL MEASUREMENT (AD: ____)

Instruction: You will be presented aural performances by first year beginning string instrumentalists (N = 8). The notation of the stimuli is in front of you. Respond to each statement on the basis of how much you agree or disagree that the statement is descriptive of the stimuli. The following is the scale interpretation.

1 = Highly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Highly Disagree

		(circle one)				
1.	Correct pitches were performed	1	2	3	4	5
2.	Intonation was accurate	1	2	3	4	5
3.	Tone was resonant	1	2	3	4	5
4.	Slurs were precise.	1	2	3	4	5
5.	Bow changes were precise	1	2	3	4	5
6.	Tempo was steady	1	2	3	4	5
7.	Rhythm was accurate	1	2	3	4	5
8.	Dynamics were executed as written	1	2	3	4	5
9.	Extraneous string noises were not heard	1	2	3	4	5

Aural Score _____

PART II (VS: ____)

ADJUDICATION FORM: VISUAL (AD: ____)

Instruction: You will be presented visual performances by first year beginning string instrumentalists (N = 8). Respond to each statement on the basis of how much you agree or disagree that the statement is descriptive of the stimuli.

1 = Highly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Highly Disagree

		(circle one)				
LEFT HAND & ARM						
1.	Neck of instrument positioned correctly in left hand	1	2	3	4	5
2.	Left hand was relaxed	1	2	3	4	5
3.	Left fingers were curved	1	2	3	4	5
4.	Left fingers were hovering over strings	1	2	3	4	5
5.	Left fingers were placed on the tapes	1	2	3	4	5
6.	Left elbow was at the proper angle	1	2	3	4	5
7.	Left wrist was straight	1	2	3	4	5
8.	Left thumb was in appropriate relationship to fingers	1	2	3	4	5
RIGHT HAND & ARM						
9.	Right fingers were curved	1	2	3	4	5
10.	Thumb was positioned properly	1	2	3	4	5
11.	Thumb was bent	1	2	3	4	5
12.	5th finger was curved.	1	2	3	4	5
13.	5th finger was properly positioned	1	2	3	4	5
14.	Bow strokes were straight	1	2	3	4	5
15.	Bowing was initiated from the elbow	1	2	3	4	5
16.	Wrist bent with bow direction	1	2	3	4	5

1 = Highly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Highly Disagree

(circle one)

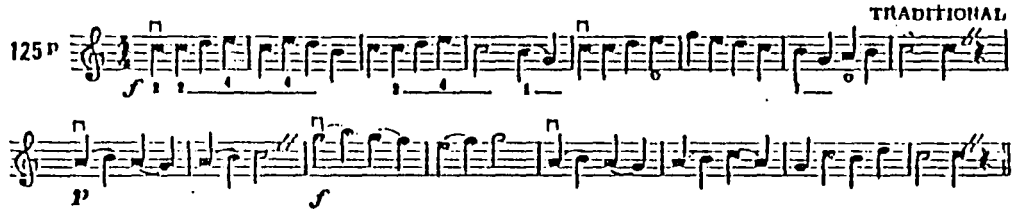
17. Bow distribution was appropriate for rhythm	1	2	3	4	5
18. Bow placement corresponded with music	1	2	3	4	5
19. Bowing movement was relaxed	1	2	3	4	5
POSTURE					
20. Instrument was positioned appropriately . . .	1	2	3	4	5
21. Appropriate posture was observed	1	2	3	4	5

Visual Score _____

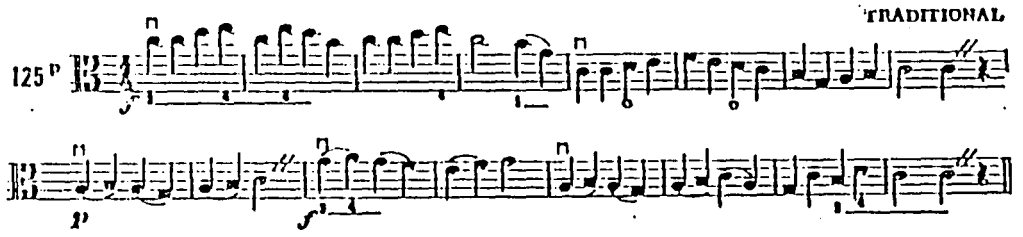
Composite (aural & visual) Performance Achievement _____

NOTATION OF "YANKEE DOODLE" FOR ADJUDICATION

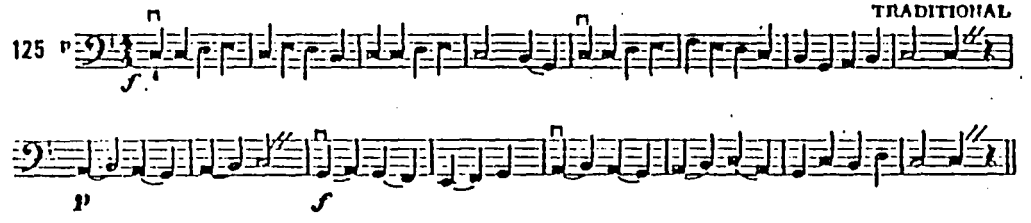
VIOLIN



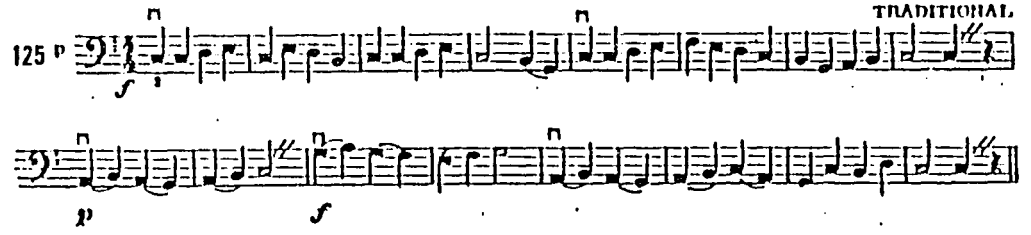
VIOLA



CELLO



DOUBLE BASS



APPENDIX D

ADJUDICATORS' QUESTIONNAIRE AND RESPONSES TO THE TRIAL EVALUATION SESSION

ADJUDICATORS' QUESTIONNAIRE AND RESPONSES

TO THE TRIAL EVALUATION SESSION

1. What changes would you make with the aural presentation of the stimuli?

   --Give us one or two practice runs. I didn't really "catch on" to what I should be listening for until the third stimulus.

   --None. Good quality sound recording, easy to adjudicate.

   --No. 5, there might be an occasion where a precise bow change would not be desired, a smooth change would be called for instead. Or did you mean coordination of fingers and bow?

2. What changes would you make with the visual presentation of the stimuli?

   --Longer segments to allow us to think about each descriptor. There wasn't enough time to look at each area on the video.

   --Unable to see thumbs.

   --Somehow show their thumbs. We couldn't see them to comment on them.

   --Make sure all instruments have tapes so we can tell if the fingers are placed correctly.

   --Could not always see tapes and finger placement.

   --Unless total recall is part of the testing situation, perhaps you could lengthen the visual. Either a longer excerpt or a repeated play of the tape after a given number of seconds. We are asked to give too many opinions for such a short view. It makes it difficult to "highly agree" with any item.

   --More attempt to see the thumbs of either hand and maybe some more angles of the fingers.

3. What descriptor or descriptors, aural and visual, would you alter, include, or eliminate from the evaluation form?

   --"5th" finger is not term usually used by string teachers. "4th" finger is the term I would suggest, though it may confuse pianists.

   --Eliminate No. 18.

   --Include a descriptor of smooth bow changes in aural part.

4. Please discuss any other changes which you feel might improve this method of evaluating performance achievement.

   --It might help to see the stimulus, fill out the form, and see it again. Or, present the left hand the first time through and then present the bow arm and posture the second time through. Sometimes, I forgot to look for specific elements of the visual stimulus.

   --The "focus" level on zoom shots should be clearer.

   --Good job overall.

APPENDIX E

PARENTAL QUESTIONNAIRE FOR PILOT AND MAIN STUDIES

Dear Parents:

The success of your child's performance achievement with a stringed instrument is dependent on practicing. During this semester's beginning string class, your child will be participating in a study on out-of-class practice. Please complete the questions listed below. Thank you.

Sincerely,

Susan Quindag
String Instructor

1. Do you have an audio cassette player available for your child's use during home practice?

   Yes ____ No ____

   If so, what is the brand and model? _____

   _____

2. Do you have a video cassette player available for your child's use during hope practice?

   Yes ____ No ____

   If so, what kind?

   VHS ____ Beta ____

   What is the brand and model? _____

   _____

3. Is your child currently studying any instrument other than strings?

   Yes _____ No _____

   a. If so, what instrument? _____

   b. How long has he or she been studying this instrument?

   _____

4. Has your child previously studied any other instrument?

   a. If so, what instrument? _____

   b. How long has he or she studied this instrument?

   _____

5. Where will your child be practicing?

   Home _____ School _____ Both _____ Other _____

6. What is your occupation and position (title)?

   Father _____

   Mother _____

APPENDIX F

SEQUENCE OF INSTRUCTION FROM APPLEBAUM'S STRING BUILDER, BOOK 1

SEQUENCE OF INSTRUCTION FROM APPLEBAUM'S

STRING BUILDER, BOOK 1

GENERAL MUSIC OBJECTIVES	PERFORMANCE OBJECTIVES
Students will identify the following:	Students will demonstrate, perform, or execute the following:
	care of instrument
	hold of instrument with correct posture
staff	right hand pizzicato
clefs (treble, alto, bass)	open strings
bar line	corresponding open stringed notes when reading music
time signature	
steady beat	open strings while maintaining a steady beat in 4/4
whole, half, and quarter notes and rest	whole, half, and quarter notes and rest by pizzicato
	correct bow hold
	straight detaché bowing with a resonant tone
	duets
	proper left hand position
sharps and natural notes	first position, first finger pattern in tune (F and C sharps)

	"tunnel" to clear unstopped strings
	music in G and D major
tied notes	tied notes
dotted notes	dotted notes
	two note slurs
	three note slurs
3/4 time	3/4 time
	first position second finger pattern in tune (F and C naturals)
up-beat	up-beat
repeat sign	repeated music
	first position third finger pattern in tune (low first finger for violinists)
	criss-cross fingerings
dynamics ranging from piano to forte	dynamics ranging from piano to forte with appropriate bow distribution
ritardando	ritardando
phrasing	phrasing
	left hand pizzicato and fourth finger placement for violinists and violists
	shifting for double bass players
	C major scale
eighth notes	eighth notes
2/4 time	2/4 time

APPENDIX G

WEEKLY ASSIGNMENT SHEET FOR THE PILOT STUDY

WEEKLY ASSIGNMENT SHEET FOR (DATE)
DUE EVERY MONDAY

REQUIRED PRACTICE TIME: 90 MINUTES PER WEEK

Assignment for Monday, (date)

1.

2.

3.

Special Goals:

Assignment for Wednesday, (date)

1.

2.

3.

Special Goals:

Assignment for Friday, (date)

1.

2.

3.

Special Goals:

Daily practice time:

Monday _____

Tuesday _____

Wednesday _____

Thursday _____

Friday _____

Saturday _____

Sunday _____

Total _____

Parent's Signature _____

Date _____

APPENDIX H

REVISED ADJUDICATION FORM FOR THE PILOT STUDY

REVISED ADJUDICATION FORM FOR PILOT STUDY

PART 1 (AS: ____)

ADJUDICATION FORM: AURAL (AD: ____)

Instruction: After one practice stimuli, you will be presented aural performances by first year beginning string instrumentalists (N = 10). The notation of the stimuli is in front of you. Respond to each statement on the basis of how much you agree or disagree that the statement is descriptive of the stimuli. The following is the scale interpretation.

1 = Highly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Highly Disagree

		(circle one)				
1.	Correct pitches were performed	1	2	3	4	5
2.	Intonation was accurate	1	2	3	4	5
3.	Tone was resonant	1	2	3	4	5
4.	Slurs were precise	1	2	3	4	5
5.	Bow changes were synchronized with left finger placement	1	2	3	4	5
6.	Tempo was steady	1	2	3	4	5
7.	Rhythm was accurate	1	2	3	4	5
8.	Dynamics were executed as written	1	2	3	4	5
9.	Extraneous string noises were not heard	1	2	3	4	5

Aural Score _____

PART II (VS: ____)

ADJUDICATION FORM: VISUAL (AD: ____)

Instruction: After one practice stimuli, you will be presented visual performances by first year beginning string instrumentalists (N = 10). Each performance will be presented twice. The first performance will be a long shot, the second performance will be close shots of the left and right hands. Respond to each statement on the basis of how much you agree or disagree that the statement is descriptive of the stimuli.

1 = Highly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Highly Disagree

		(circle one)				
LEFT HAND & ARM						
1.	Neck of instrument positioned correctly in left hand	1	2	3	4	5
2.	Left hand was relaxed	1	2	3	4	5
3.	Left fingers were curved	1	2	3	4	5
4.	Left fingers were hovering over strings . . .	1	2	3	4	5
5.	Left fingers were placed on the tapes	1	2	3	4	5
6.	Left elbow was at the proper angle	1	2	3	4	5
7.	Left wrist was straight	1	2	3	4	5
8.	Left thumb was in appropriate relationship to fingers	1	2	3	4	5
RIGHT HAND & ARM						
9.	Right fingers were curved	1	2	3	4	5
10.	Thumb was properly positioned	1	2	3	4	5
11.	Thumb was bent	1	2	3	4	5
12.	5th finger was curved	1	2	3	4	5
13.	5th finger was positioned properly	1	2	3	4	5
14.	Bow strokes were straight	1	2	3	4	5
15.	Bowing was initiated from the elbow	1	2	3	4	5
16.	Wrist bent with bow direction	1	2	3	4	5

1 = Highly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Highly Disagree

(circle one)

17. Bow distribution was appropriate for rhythm 1 2 3 4 5

18. Bowing movement was relaxed 1 2 3 4 5

POSTURE

19. Instrument was positioned appropriately. . . . 1 2 3 4 5

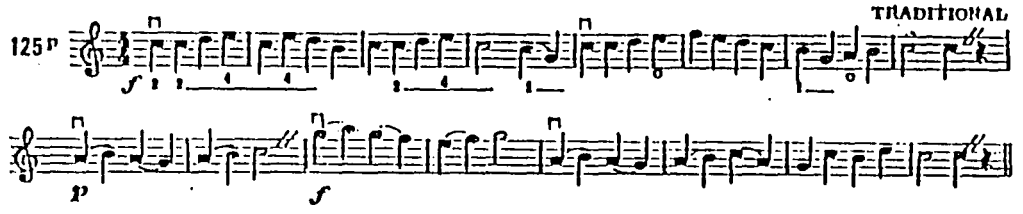
20. Appropriate posture was observed 1 2 3 4 5

Visual Score _____

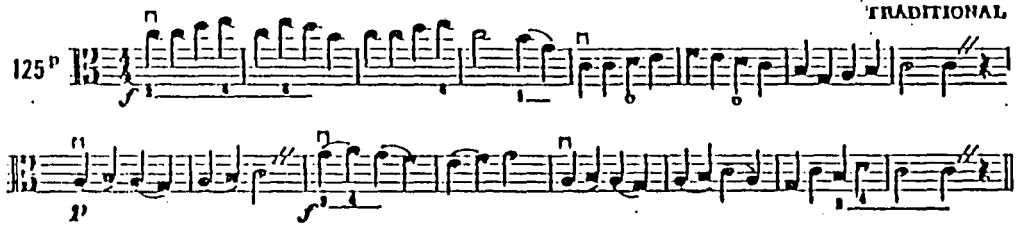
Composite (aural & visual) Performance Achievement _____

NOTATION OF "YANKEE DOODLE" FOR ADJUDICATION

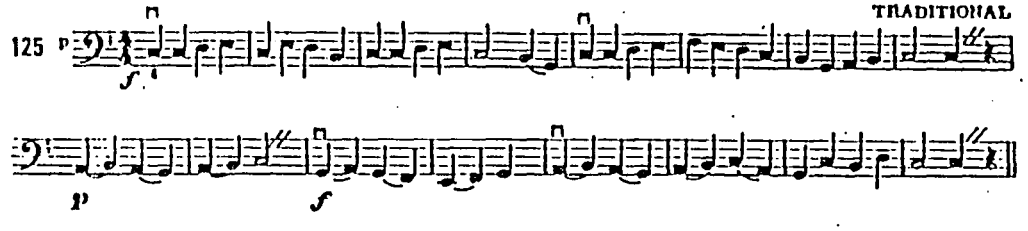
VIOLIN



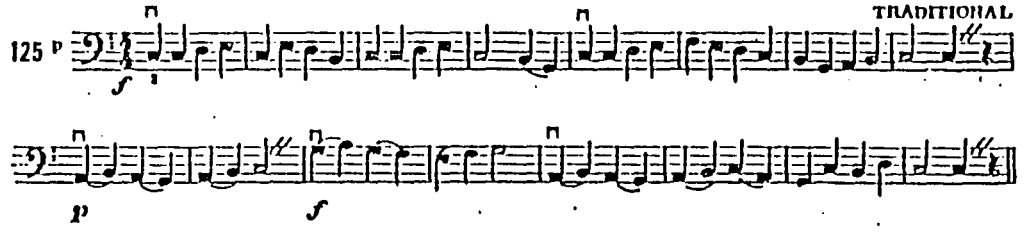
VIOLA



CELLO



DOUBLE BASS



APPENDIX I

ADJUDICATORS' QUESTIONNAIRE AND RESPONSES TO THE EVALUATION SESSION AFTER THE PILOT STUDY

ADJUDICATORS' QUESTIONNAIRE AND RESPONSES TO THE EVALUATION SESSION AFTER THE PILOT STUDY

1. What changes would you make with the aural presentation of the stimuli?

   --No changes are necessary.

   --No suggestions. Aural presentation was very good.

2. What changes would you make with the visual presentation of the stimuli?

   --Two presentations of each stimuli was very good.

   --The angles and focus were much better.

3. What descriptor or descriptors (aural and visual) would you alter, include, or eliminate from the evaluation form?

   --Need descriptor on bow tilt.

   --Can you reverse the numerical value so that "5" would mean "strongly agree?" That way, the better performance would get assigned a high numerical value. It would be less confusing for me.

4. Please discuss any other changes which you feel might improve this method of evaluating performance achievement.

   --Because visual presentation was longer this time than the first time, we need a longer break.

   --Evaluation session was too long. It was hard to conscentrate toward the end.

APPENDIX J

REVISED WEEKLY ASSIGNMENT SHEET FOR THE MAIN STUDY

WEEKLY ASSIGNMENT SHEET FOR (DATE)
DUE EVERY MONDAY

REQUIRED PRACTICE TIME: 90 MINUTES PER WEEK

Check box as you complete task

Assignment for Monday, (date)

1. ☐
2. ☐
3. ☐

Special Goals:

Assignment for Wednesday, (date)

1. ☐
2. ☐
3. ☐

Special Goals:

Assignment for Friday, (date)

1. ☐
2. ☐
3. ☐

Special Goals:

Daily practice time:

Monday _____

Tuesday _____

Wednesday _____

Thursday _____

Friday _____

Saturday _____

Sunday _____

Total _____

Parent's Signature _____

Date _____

APPENDIX K

FINAL REVISED ADJUDICATION FORM FOR THE MAIN STUDY

FINAL REVISED ADJUDICATION FORM FOR THE MAIN STUDY

PART 1 (AS: _____)

ADJUDICATION FORM: AURAL (AD: _____)

Instruction: After one practice stimulus, you will be presented aural performances by first year beginning string instrumentalists (N = 23). The notation of the stimuli is in front of you. Respond to each statement on the basis of how much you agree or disagree that the statement is descriptive of the stimuli. The following is the scale interpretation.

1 = Highly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Highly Agree

		(circle one)				
1.	Correct pitches were performed	1	2	3	4	5
2.	Intonation was accurate	1	2	3	4	5
3.	Tone was resonant	1	2	3	4	5
4.	Slurs were precise	1	2	3	4	5
5.	Bow changes were synchronized with left finger placement	1	2	3	4	5
6.	Tempo was steady	1	2	3	4	5
7.	Rhythm was accurate	1	2	3	4	5
8.	Dynamics were executed as written	1	2	3	4	5
9.	Extraneous string noises were not heard	1	2	3	4	5

Aural Score _____

PART II (VS: _____)

ADJUDICATION FORM: VISUAL (AD: _____)

Instruction: After one practice stimulus, you will be presented visual performances by first year beginning string instrumentalists (N = 23). Each performance will be presented twice. The first performance will be a long shot, the second performance will be close shots of the left and right hands. Respond to each statement on the basis of how much you agree or disagree that the statement is descriptive of the stimuli.

1 = Highly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Highly Agree

POSTURE	(circle one)				
1. Instrument was positioned appropriately	1	2	3	4	5
2. Appropriate posture was observed	1	2	3	4	5
LEFT HAND & ARM					
3. Neck of instrument positioned correctly in left hand	1	2	3	4	5
4. Left hand was relaxed	1	2	3	4	5
5. Left fingers were curved	1	2	3	4	5
6. Left fingers were hovering over strings . . .	1	2	3	4	5
7. Left fingers were placed on the tapes	1	2	3	4	5
8. Left elbow was at the proper angle	1	2	3	4	5
9. Left wrist was straight	1	2	3	4	5
10. Left thumb was in appropriate relationship to fingers	1	2	3	4	5
RIGHT HAND & ARM					
11. Right fingers were curved	1	2	3	4	5
12. Thumb was properly positioned	1	2	3	4	5
13. Thumb was bent	1	2	3	4	5
14. 5th finger was curved.	1	2	3	4	5

1 = Highly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Highly Agree

(circle one)

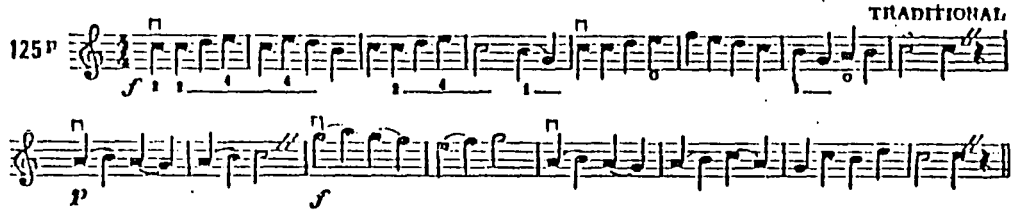
15.	5th finger was properly positioned	1	2	3	4	5
16.	Bow strokes were straight	1	2	3	4	5
17.	Bowing was initiated from the elbow	1	2	3	4	5
18.	Wrist bent with bow direction	1	2	3	4	5
19.	Tilt of the bow was correct	1	2	3	4	5
20.	Bow distribution was appropriate for rhythm	1	2	3	4	5
21.	Bow placement corresponded with music	1	2	3	4	5
22.	Bowing movement was relaxed	1	2	3	4	5

Visual Score _____

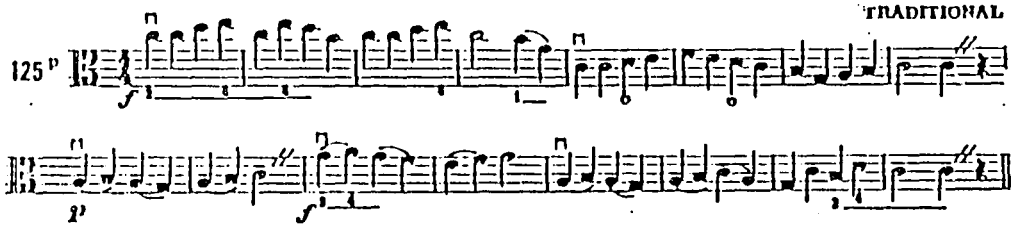
Composite (aural & visual) Performance Achievement _____

NOTATION OF "YANKEE DOODLE" FOR ADJUDICATION

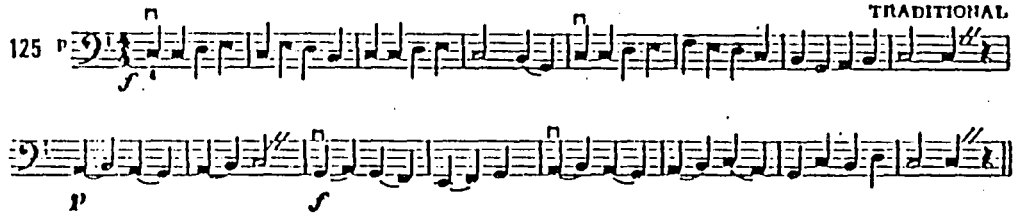
VIOLIN



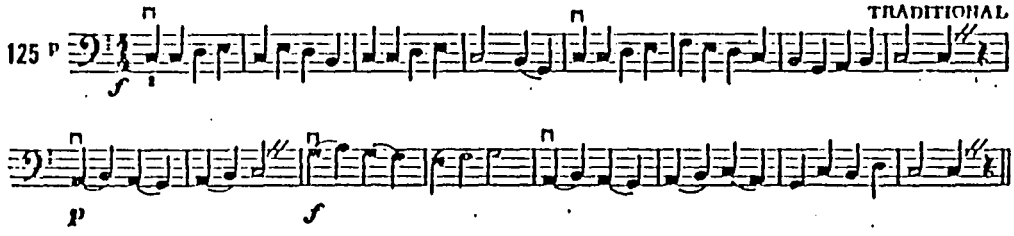
VIOLA



CELLO



DOUBLE BASS



APPENDIX L

PARENTAL CONTRACT

PARENTAL CONTRACT

Dear Parents,

This semester your child will be participating in a study to determine an effective approach to practicing. After four weeks of instruction your child will be required to practice out-of-class for 90 minutes per week, approximately fifteen minutes per day, six days per week for 10 weeks, with a supplemental audiotape, supplemental videotape, or with the instructional method book. Please monitor your child's practicing by making sure he or she practices the specified amount of time and the appropriate assignment. However, do not assist your child during practice. Also, please remember to verify your child's practice time by signing and dating each weekly assignment sheet on the second page.

Please sign this agreement below indicating that you will cooperate with the criteria stated. Your assistance is greatly appreciated.

Sincerely,

Susan Quindag
String Instructor

I agree to monitor my child's home practice.

Signature_____

Date_____

APPENDIX M

LETTER TO PARENTS

September 30, 1991

To the parents of:

Dear Parents:

At the beginning of the semester, I announced that students enrolled the beginning string class will participate in a project to determine an effective method of home practicing. Today your child was given an audiotape of an instrumentalist performing the exercises from String Builder, Book 1 (your child's music book). Starting today, your child will practice at least 15 minutes a day, six days per week with this audiotape. Instructions were presented in class today regarding the correct practice procedure.

Please assist me during this project by ensuring that your child practices the assignments from the weekly assignment sheet for 15 minutes a day with the audiotape. Remind your child to write down the amount of practice time on the assignment sheet and sign the sheet before Monday's string class.

The production of the audiotapes was expensive; therefore, please keep it in a safe place. If the tape is lost, you will be charged a replacement fee.

I appreciate your assistance with this project. I have enjoyed working with your child and foresee a good semester ahead. Of course, if I could be of any assistance please do not hesitate to call me at any time.

Sincerely,

Susan Quindag
String Instructor

September 30, 1991

To the parents of:

Dear Parents:

At the beginning of the semester, I announced that students enrolled in the beginning string class will participate in a project to determine an effective method of home practicing. Today your child was given a videotape of an instrumentalist performing the exercises from String Builder, Book 1 (your child's music book). Starting today, your child will practice at least 15 minutes a day, six days per week with this videotape. Instructions were presented in class today regarding the correct practice procedure.

Please assist me during this project by ensuring that your child practices the assignment from the weekly assignment sheet for 15 minutes a day with the videotape. Remind your child to write down the amount of practice time on the assignment sheet and sign the sheet before Monday's string class.

The production of the videotapes was expensive; therefore, please keep it in a safe place. If the tape is lost, you will be charged a replacement fee.

I appreciate your assistance with this project. I have enjoyed working with your child and foresee a good semester ahead. Of course, if I could be of any assistance please do not hesitate to call me at any time.

Sincerely,

Susan Quindag
String Instructor

September 30, 1991

To the parents of:

Dear Parents:

At the beginning of the semester, I announced that students enrolled in the beginning string class will participate in a project to determine an effective method of home practicing. Starting today, your child will practice at least 15 minutes a day, six days per week with the instruction book. Instructions were presented in class today regarding the correct practice procedure.

Please assist me during this project by ensuring that your child practices the assignment from the weekly assignment sheet for 15 minutes a day. Remind your child to write down the amount of practice time on the assignment sheet and sign the sheet before Monday's string class.

I appreciate your assistance with this project. I have enjoyed working with your child and foresee a good semester ahead. Of course, if I could be of any assistance please do not hesitate to call me at any time.

Sincerely,

Susan Quindag
String Instructor